No. 22O142	
Title:	**Florida, Plaintiff** **v.** **Georgia**
Docketed:	October 4, 2013
Lower Ct:	
Questions Presented	

DATE	PROCEEDINGS AND ORDERS
Sep 30 2013	Documents filed with the Special Master may be found on the Special Master's website at www.pierceatwood.com/floridavgeorgia142original
Oct 01 2013	Motion for leave to file a bill of complaint filed. (Response due December 2, 2013)
Oct 31 2013	Order extending time to file response to the bill of complaint to and including January 31, 2014.
Jan 31 2014	Opposition to motion for leave to file a complaint of respondent Georgia filed.
Feb 10 2014	Reply in support of its motion for leave to file a complaint of Florida, Plaintiff filed.
Feb 12 2014	DISTRIBUTED for Conference of February 28, 2014.
Mar 03 2014	The Solicitor General is invited to file a brief in this case expressing the views of the United States.
Sep 18 2014	Brief amicus curiae of United States filed.
Oct 08 2014	DISTRIBUTED for Conference of October 31, 2014.
Oct 08 2014	Supplemental brief of petitioner Florida, Plaintiff filed. (Distributed)
Oct 09 2014	Supplemental brief of respondent Georgia filed. (Distributed)
Oct 10 2014	Supplemental brief of petitioner Florida, Plaintiff filed. (Distributed)

Nov 03 2014	Motion for leave to file a bill of complaint GRANTED. Defendant is allowed 30 days within which to file an answer.
Nov 19 2014	It is ordered that Ralph I. Lancaster, Esquire, of Portland, Maine, is appointed Special Master in this case with authority to fix the time and conditions for the filing of additional pleadings, to direct subsequent proceedings, to summon witnesses, to issue subpoenas, and to take such evidence as may be introduced and such as he may deem it necessary to call for. The Special Master is directed to submit Reports as he may deem appropriate. The compensation of the Special Master, the allowances to him, the compensation paid to his legal, technical, stenographic, and clerical assistants, the cost of printing his Reports, and all other proper expenses, including travel expenses, shall be charged against and be borne by the parties in such proportion as the Court may hereafter direct.
Nov 24 2014	Oath of Special Master filed.
Nov 25 2014	Order extending time to file an answer granted to and including February 2, 2015.
Feb 12 2015	Answer of Georgia filed with Special Master January 8, 2015, received by the Court February 12, 2015.
Apr 14 2015	First Interim Motion of the Special Master for Allowance of Fees and Disbursements filed by Special Master.
Apr 28 2015	DISTRIBUTED for Conference of May 14, 2015.
May 18 2015	Motion of the Special Master for Allowance of Fees and Disbursements GRANTED The motion of the Special Master for allowance of fees and disbursements is granted, and the Special Master is awarded a total of $47,635.01 for the period November 19, 2014, through March 31, 2015, to be paid equally by the parties.
Sep 10 2015	Second Interim Motion of the Special Master for Allowance of Fees and Disbursements filed by Special Master.
Sep 23 2015	DISTRIBUTED for Conference of October 9, 2015.
Oct 13 2015	Motion of the Special Master for Allowance of Fees and Disbursements GRANTED The motion of the Special Master for allowance of fees and disbursements is granted, and the Special Master is awarded a total of $70, 245.52 for the period April 1, 2015, through August 31, 2015, to be paid equally by the parties.
Feb 10 2016	Third Interim Motion of the Special Master for Allowance of Fees and Disbursements filed by Special Master.

Feb 24 2016	DISTRIBUTED for Conference of March 18, 2016.
Mar 21 2016	The motion of the Special Master for allowance of fees and disbursements is granted, and the Special Master is awarded a total of $41,564.31 for the period September 1, 2015, through January 31, 2016, to be paid equally by the parties.
Sep 13 2016	Fourth Interim Motion of the Special Master for Allowance of Fees and Disbursements filed by Special Master.
Oct 17 2016	The motion of the Special Master for allowance of fees and disbursements is granted, and the Special Master is awarded a total of $57,333, for the period February 1, 2016, through August 31, 2016, to be paid equally by the parties.
Jan 11 2017	Fifth Interim Motion of the Special Master for Allowance of Fees and Disbursements filed by Special Master.
Jan 25 2017	DISTRIBUTED for Conference of February 17, 2017.
Feb 16 2017	Report of the Special Master received.
Feb 21 2017	The motion of the Special Master for allowance of fees and disbursements is granted, and the Special Master is awarded a total of $213,547.35 for the period September 1, 2016, through December 31, 2016, to be paid equally by the parties.
Mar 01 2017	Special Master Report DISTRIBUTED for Conference of March 17, 2017.
Mar 01 2017	Final Motion of the Special Master for Allowance of Fees and Disbursements filed by Special Master.
Mar 15 2017	DISTRIBUTED for Conference of March 31, 2017.
Mar 20 2017	The Report of the Special Master is received and ordered filed. Exceptions to the Report, with supporting briefs, may be filed within 45 days. Replies, if any, with supporting briefs, may be filed within 30 days. Sur-replies, if any, with supporting briefs, may be filed within 30 days.
Apr 03 2017	Motion of the Special Master for Allowance of Fees and Disbursements filed by Special Master. GRANTED, and the Special Master is awarded a total of $50,933.89, for the period January 1, 2017, through February 28, 2017, to be paid equally by the parties.
Apr 07 2017	Florida's April 6, 2017, request for an extension of time has been granted as follows: Exceptions to the Special Masters Report are due on or before May 31, 2017; Replies are due on or before July 31, 2017; Sur-replies are due on or before August 30, 2017.

May 31 2017	Exceptions to Report of the Special Master and Brief in Support of Exceptions filed by Florida
Jul 31 2017	Reply of Georgia to Florida's exceptions to the report of the Special Master filed.
Aug 07 2017	Brief amicus curiae of United States in support of overruling Florida's exception 2C to the Report of the Special Master filed.
Aug 07 2017	Brief amicus curiae of State of Colorado filed.
Aug 07 2017	Brief amici curiae of Atlanta Regional Commission Dekalb County, et al., filed.
Aug 30 2017	Florida's Sur-Reply in Support of Exceptions to Report of the Special Master filed.
Oct 10 2017	The Exceptions to the Special Master Report are set for oral argument in due course.
Oct 18 2017	Motion of the Solicitor General for leave to participate in oral argument as amicus curiae and for divided argument filed.
Nov 06 2017	Motion of the Solicitor General for leave to participate in oral argument as amicus curiae and for divided argument GRANTED.
Nov 17 2017	SET FOR ARGUMENT ON Monday, January 8, 2018
Jan 08 2018	Argued. For plaintiff: Gregory G. Garre, Washington, D. C. For defendant: Craig S. Primis, Washington, D. C.; and Edwin S. Kneedler, Deputy Solicitor General, Department of Justice, Washington, D. C. (for United States, as amicus curiae.)

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BRIEFS

Supreme Court, U.S.
FILED
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No. 142, Original

In the Supreme Court of the United States

STATE OF FLORIDA, PLAINTIFF

v.

STATE OF GEORGIA

ON MOTION FOR LEAVE TO FILE A COMPLAINT

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

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In the Supreme Court of the United States

No. 142, Original

STATE OF FLORIDA, PLAINTIFF

v.

STATE OF GEORGIA

ON MOTION FOR LEAVE TO FILE A COMPLAINT

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE

This brief is filed in response to the order of this Court inviting the Solicitor General to express the views of the United States. In the view of the United States, the Court should deny Florida leave to file its complaint without prejudice to refiling after the United States Army Corps of Engineers (Corps) has issued a revised Master Water Control Manual (Master Manual) for the Apalachicola-Chattahoochee-Flint River Basin (ACF Basin). In the alternative, the Court should grant Florida leave to file, but stay or provide for tailoring of any further proceedings until the Corps has issued the revised Master Manual.

STATEMENT

A. The Apalachicola-Chattahoochee-Flint River Basin

The Chattahoochee River originates in north Georgia, flows southwest past Atlanta, and then flows south along Georgia's border, first with Alabama, then with Florida. At Georgia's southwest corner, the

Chattahoochee joins the Flint River, which originates south of Atlanta and flows through central Georgia. The Chattahoochee and the Flint join to form the Apalachicola River, which flows south through northwest Florida and into the Apalachicola Bay in the Gulf of Mexico. See Br. in Opp. App. 1a (map). The ACF Basin drains 19,800 square miles in central and west Georgia, southeast Alabama, and northwest Florida. About 74% of the Basin lies in Georgia, 15% in Alabama, and 11% in Florida. United States Army Corps of Eng'rs, *Final Updated Scoping Report, Environmental Impact Statement, Update of the Water Control Manual for the Apalachicola-Chattahoochee-Flint (ACF) River Basin, in Alabama, Florida, and Georgia* 2 (Mar. 2013) (*Scoping Report*).

B. Federal Projects in the ACF Basin

In 1939, the Corps transmitted a report to Congress recommending development of the ACF Basin for multiple purposes, including navigation, hydroelectric power, national defense, commercial value of riparian lands, recreation, and industrial and municipal water supply. H.R. Doc. No. 342, 76th Cong., 1st Sess. 77 (1939). Congress approved the Corps' plan in the River and Harbor Act of 1945, Pub. L. No. 79-14, § 2, 59 Stat. 10, 17. In 1946, the Corps recommended several changes to the original plan, including moving a proposed hydropower-generating dam further upstream from Atlanta to its current location at Buford, Georgia. H.R. Doc. No. 300, 80th Cong., 1st Sess. 27-28 (1947). Congress authorized the modified plan in the River and Harbor Act of 1946, Pub. L. No. 79-525, § 1, 60 Stat. 634, 635. In 1962, Congress authorized the construction of a dam at West Point, Georgia. See

Flood Control Act of 1962, Pub. L. No. 87-874, § 203, 76 Stat. 1180, 1182.

Pursuant to those congressional authorizations, the Corps currently operates five federal dams in the ACF Basin. Four are in Georgia, each located on the Chattahoochee. See *Scoping Report* 4. The northernmost dam is Buford Dam, which is north of Atlanta and forms Lake Sidney Lanier. *Id.* at 5. Next is West Point Dam, followed by Walter F. George Dam and then George W. Andrews Dam, each of which is located on the stretch of the Chattahoochee that runs along the Georgia-Alabama border. *Id.* at 6-8; *id.* at 3 (map). The southernmost dam is the Jim Woodruff Dam in Florida, immediately below the confluence of the Chattahoochee and the Flint. *Id.* at 8. The flows of those rivers are impounded by Woodruff Dam and stored in its reservoir, Lake Seminole. *Ibid.* Water released from Woodruff Dam flows south into the Apalachicola. *Id.* at 3 (map).

The Corps operates the system of dams in the ACF Basin pursuant to a Master Manual governing all the dams and separate reservoir regulation manuals for each individual dam. The current Master Manual was completed in 1958, before construction of the West Point, Walter F. George, and George W. Andrews Dams. *Scoping Report* 17, 138. The Master Manual has not been comprehensively revised since then, due in recent years to restrictions resulting from litigation involving the Corps' operations. *Id.* at 13-17.

C. Past Litigation

1. In 1989, the Corps completed a draft Post-Authorization Change Notification Report (PAC report) that recommended a reallocation of some storage in Lake Lanier to water supply purposes in Geor-

gia. See *In re MDL 1824 Tri-State Water Rights Litig.*, 644 F.3d 1160, 1173 (11th Cir. 2011) (per curiam) (*Tri-State*), cert. denied, 133 S. Ct. 25 (2012). The draft PAC report included as an appendix a draft updated Master Manual for the federal projects in the ACF Basin. *Ibid.* The reallocated storage for water supply would have been utilized both by allowing withdrawals directly from Lake Lanier and by releasing water from Buford Dam for withdrawal from the Chattahoochee downstream. *Ibid.* The Corps had previously furnished some water supply through interim contracts with water supply providers. Most of those contracts expired by 1990, but the Corps continued to allow localities to receive water through the Buford Project. *Ibid.*

a. In 1990, Alabama filed suit to enjoin the Corps from carrying out the draft PAC report's recommendations. *Alabama* v. *United States Army Corps of Eng'rs*, No. 90-V-1331 (N.D. Ala. filed June 28, 1990) (*Alabama*); see also *Tri-State*, 644 F.3d at 1174 (summarizing litigation history). Florida and Georgia intervened, and the parties agreed to stay the litigation. *Ibid.* In 1992, the parties signed a Memorandum of Agreement (MOA) that provided for a comprehensive study of water issues in the ACF Basin and for the Corps to withdraw the draft PAC report. *Ibid.* The MOA contained a "live-and-let-live" provision that allowed the States to withdraw water from the ACF Basin for water supply and to make reasonable increases in those withdrawals, but the parties agreed that the MOA "shall [not] be construed as changing the status quo as to the Army's authorization of water withdrawals." *In re Tri-State Water Rights Litig.*, 07-

MD-00001 Docket entry No. 106, at ACF19320-ACF19321 (M.D. Fla. Apr. 14, 2008).

In 1997, after the study was completed, the parties replaced the MOA with the Apalachicola-Chattahoochee-Flint River Basin Compact (ACF Compact), to which Congress consented. See ACF Compact, Pub. L. No. 105-104, 111 Stat. 2219-2232. The Compact created a framework for negotiating an equitable allocation of water among the three States, Art. VII, 111 Stat. 2222-2224, and it contained a live-and-let-live provision that allowed for the continued withdrawal, diversion, or consumption of water of the ACF Basin, with reasonable increases, without giving any State a permanent right to the amount of water used between January 3, 1992 (the date of the MOA) and the date on which the States agreed to an allocation formula, Art. VII(c), 111 Stat. 2223-2224. The ACF Compact was set to expire on December 31, 1998, Art. VIII(a)(3), 111 Stat. 2224, but it was extended several times and remained in place until August 31, 2003, see *Tri-State*, 644 F.3d at 1175. The *Alabama* case remained stayed while the ACF Compact was in effect. *Ibid.*

b. Throughout that period, the Corps continued to operate the Buford Project to provide for water-supply withdrawals in Georgia without formal contracts with water-supply providers. *Tri-State*, 644 F.3d at 1175. In 2000, Georgia submitted a formal request to the Corps to reallocate storage in Lake Lanier to water supply to meet Georgia's needs through 2030. *Id.* at 1176. Georgia then filed suit seeking to compel the Corps to grant its request. See *Georgia* v. *United States Army Corps of Eng'rs*, No. 01-CV-00026 (N.D. Ga. filed Feb. 7, 2001) (*Georgia*).

The Corps later determined that, by operation of the Water Supply Act of 1958, 43 U.S.C. 390b, it lacked authority to accommodate Georgia's request without congressional approval. *Tri-State*, 644 F.3d at 1176. That Act authorizes the Corps to allocate storage "in any reservoir or project" for water supply to meet "present or anticipated future demand," provided that the beneficiary States or localities pay for the storage. 43 U.S.C. 390b(b). An exception, however, specifies that a "[m]odification[]" of an existing project "to include storage" for water supply requires congressional approval if the modification "would seriously affect the purposes for which the project was authorized, surveyed, planned, or constructed, or * * * would involve major structural or operational changes." 43 U.S.C. 390b(d). The *Georgia* case was abated pending resolution of the *Alabama* case. *Tri-State*, 644 F.3d at 1176.

c. Meanwhile, the Southeastern Federal Power Customers (SeFPC), a group that buys electric power generated at Buford Dam, concluded that it was paying too much for that power because water-supply providers in Georgia were drawing on water from the Buford Project without paying enough to offset the loss in hydropower generation. *Tri-State*, 644 F.3d at 1175. In December 2000, SeFPC filed suit in the District of Columbia seeking to compel the Corps either to end the alleged overuse of storage for water supply, or to compensate SeFPC for the loss of hydropower value. See *Southern Fed. Power Customers, Inc.* v. *Caldera*, 301 F. Supp. 2d 26, 30 (2004) (*SeFPC*). The Corps, SeFPC, Georgia, and the water supply providers settled the case. *Ibid.* But on appeal by Alabama and Florida, which had intervened, the D.C. Circuit

concluded that the settlement violated the Water Supply Act of 1958 because it amounted to a reallocation of storage that would involve a major operational change and thus required congressional approval. *Southeastern Fed. Power Customers, Inc.* v. *Geren*, 514 F.3d 1316, 1325 (2008), cert. denied, 555 U.S. 1097 (2009); see 43 U.S.C. 390b(d).

2. a. After the *SeFPC* case was remanded to district court, the Judicial Panel on Multidistrict Litigation transferred it, along with the *Alabama* and *Georgia* cases, to the Middle District of Florida for consolidated proceedings. See *In re Tri-State Water Rights Litig.*, 481 F. Supp. 2d 1351 (J.P.M.L. 2007); *Southeastern Fed.* v. *Caldera*, 00-CV-02975 Docket entry No. 223 (D.D.C. Aug. 11, 2008) (transfer order). In those proceedings, the parties filed cross-motions for summary judgment addressing the Corps' authority to operate the Buford Project. *Tri-State*, 644 F.3d at 1177. The district court held that the Corps' interim operations, allowing releases from Lake Lanier for water supply purposes, constituted a "de facto" reallocation of storage in the reservoir to water supply that constituted a "major operational change" under the Water Supply Act of 1958 and thus required congressional approval. *In re Tri-State Water Rights Litig.*, 639 F. Supp. 2d 1308, 1347-1350 (M.D. Fla. 2009). The court also held that the Corps necessarily had correctly denied Georgia's much larger storage request. *Id.* at 1352.

b. The Eleventh Circuit reversed. *Tri-State*, 644 F.3d at 1160-1205. It concluded that the district court lacked jurisdiction over the claims by Alabama and SeFPC challenging the Corps' operation of the Buford Project because they did not challenge final agency

action by the Corps as required by the Administrative Procedure Act, 5 U.S.C. 704. *Tri-State*, 644 F.3d at 1181-1185. With respect to Georgia's reallocation request, the court held that Congress, in the 1946 Act, had unambiguously provided that the Buford Project would be operated to accommodate downstream water supply demands and therefore allowed an allocation of storage in Lake Lanier for that purpose. *Id.* at 1186-1192. The court declined, however, to define the precise scope of the Corps' authority under the 1946 and 1958 Acts to accommodate Georgia's request for water supply storage. *Id.* at 1196-1197. This Court denied certiorari. 133 S. Ct. 25 (2012).

c. In its decision, the Eleventh Circuit directed the district court to remand to the Corps to reconsider Georgia's water supply storage request. *Tri-State*, 644 F.3d at 1196-1197. The court gave the Corps one year (until June 2012) to arrive at a "well-reasoned, definitive, and final judgment as to its authority" to reallocate storage in Lake Lanier to water supply. *Id.* at 1205. The Corps discharged that obligation on June 25, 2012, concluding that it has sufficient statutory authority to meet Georgia's water supply request. See U.S. Army Corps of Eng'rs, Dep't of the Army, *Memorandum for the Chief of Eng'rs* 2, 47-48, http://www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/docs/2012ACF_legalopinion.pdf. But the Corps did not decide to what extent it would allocate storage to water supply when balancing that demand against hydropower generation, navigation, and other authorized purposes. *Ibid.*

D. The Ongoing Effort to Update the Master Manual

Although the Corps' 1989 PAC report was withdrawn in 1992 pursuant to the MOA, the Corps has

conducted its operations in the ACF Basin in accordance with the draft updated Master Manual appended to the PAC report, with some modifications. See *Scoping Report* 13, 18-19; pp. 3-4, *supra*. The Corps began the Master Manual update process again in 2008, 73 Fed. Reg. 9780 (Feb. 22, 2008), but the Corps had to revise the scope of that process in 2009 to account for the district court's ruling in the multidistrict proceedings that the Corps lacked authority to provide water supply from Lake Lanier, 74 Fed. Reg. 59,966 (Nov. 19, 2009). After the Eleventh Circuit reversed that decision, the Corps again revised the scope of its proposed Master Manual update. 77 Fed. Reg. 62,224 (Oct. 12, 2012).

In March 2013, as part of its analysis under the National Environmental Policy Act of 1969, 42 U.S.C. 4321 *et seq.*, the Corps released a final scoping report for its update of the Master Manual, which summarizes public comments on the update process and describes the Corps' process for moving forward. *Scoping Report* 29-139. The update process, which is ongoing, will include a determination of whether and to what extent storage in Lake Lanier will be used to accommodate the present and future water supply needs of the Atlanta metropolitan area. *Id.* at 139. The update will also set the minimum flow rates required at Woodruff Dam to meet federal project purposes and the requirements of the Endangered Species Act of 1973, 16 U.S.C. 1531 *et seq.* The Corps expects to release a draft Master Manual and an environmental impact statement in September 2015, and it expects final approval and implementation of the Master Manual in March 2017. See U.S. Army Corps of Eng'rs, *ACF Master Water Control Manual Update*,

http://www.sam.usace.army.mil/Missions/PlanningEnvironmental/ACFMasterWaterControlManualUpdate.aspx (last visited Sept. 17, 2014).

E. The Current Controversy

1. Florida has sought leave to file this original action to obtain an equitable apportionment of the waters of the ACF Basin. Compl. para. 1; see *id.* at 21 (prayer for relief). Florida alleges that the ecosystem and economy of the Apalachicola region "are suffering serious harm" because of Georgia's consumption and storage of water from the Chattahoochee and Flint River Basins "for municipal, industrial, recreational, and agricultural uses." *Id.* para. 5. Florida alleges that "storage, evaporation, and consumption of water" in Georgia have "diminished the amount of water entering Florida in spring and summer of drought years by as much as 3,000-4,000 cubic feet per second," and that, in recent drought conditions, the average flow of the Apalachicola has been less than 5,500 cubic feet per second from late spring through fall, conditions that "were unprecedented before 2000." *Id.* para. 50.

Florida alleges that the depletion of freshwater flows during drought years precipitated a collapse in the oyster industry in Apalachicola Bay because of resultant rising salinity levels. Compl. paras. 6, 43, 54-56. Florida further alleges that reduced flows in the Apalachicola have resulted in the deaths of thousands of threatened and endangered mussels and rendered inaccessible the spawning habitat for the threatened Gulf sturgeon. *Id.* para. 58. Florida maintains that Georgia's consumptive uses are expected to double by 2040, and that the resulting reduction in freshwater flowing into the Apalachicola River will

jeopardize the "ecology, economy, and way of life" in the Apalachicola region. *Id.* paras. 7, 45, 59.

Florida acknowledges that the Corps controls releases into the Apalachicola from Woodruff Dam, but it contends that "[t]he Corps determines how much water to release from its reservoirs based, in part, upon calculated inflows to the ACF Basin." Compl. para. 23. Florida alleges that as Georgia's storage and use of water cause inflows in the Basin to decline, "less water reaches Florida due to both the hydrologic depletions and the Corps' operational protocols." *Ibid.*

Based on these harms, Florida asks the Court to equitably apportion the waters of the ACF Basin. Compl. para. 1; see *id.* at 21. Florida alleges that it has exhausted all other reasonable means to negotiate an equitable apportionment. *Id.* paras. 9-12.

Florida further alleges that all of Georgia's increases in municipal and industrial water consumption after 1992 were subject to the live-and-let-live provisions of the MOA and the ACF Compact, and that Georgia therefore has no vested rights in those increases. Compl. paras. 10-11. Accordingly, Florida also requests that the Court enter an order "capping Georgia's overall depletive water uses at the level then existing on January 3, 1992." *Id.* at 21.

2. Georgia contends that Florida's complaint is premature because Florida's alleged injury stems from inadequate flows from Woodruff Dam at the Florida state line, and the Corps is currently engaged in a process that will determine what those flows will be going forward. Br. in Opp. 17-25. Georgia further contends that, "[u]ntil the Corps' proceedings are completed, neither the parties nor the Court will know

whether the flow rate the Corps sets at the Georgia-Florida border injures Florida," or whether Florida would claim any separate injury caused by Georgia. *Id.* at 21. Georgia maintains that the Corps' process for examining and implementing the statutory purposes of the federal projects in the ACF Basin should "legally and logically" take precedence over an original action applying the federal common law of equitable apportionment, which serves only "to fill the interstices of federal statutory law." *Id.* at 23-25.

Georgia further contends that Florida has not alleged sufficient injury to warrant this Court's exercise of its original jurisdiction. Br. in Opp. 25-31. Georgia challenges Florida's allegations that Georgia's consumption of water significantly diminishes the flow of the Apalachicola, because Georgia states that it returns to the Chattahoochee 70% of the water it withdraws. *Id.* at 26. Georgia further contends that even if its consumption reduces flows in the Apalachicola as Florida alleges, Florida has not demonstrated that those reduced flows have caused any significant harm. *Id.* at 28-31. Georgia maintains that causes other than low flow in the Apalachicola, like drought and overharvesting, caused any harm suffered by the Apalachicola oyster industry. *Id.* at 29-31.

DISCUSSION

Florida has pleaded an interstate water dispute of sufficient importance to warrant this Court's exercise of its original jurisdiction, and no other judicial forum is suitable for resolving the overall controversy. Practical considerations, however, weigh against the Court's resolution of Florida's claims before the Corps has completed its process of updating the Master Manual for the federal projects in the ACF Basin.

The Court accordingly should deny Florida leave to file its complaint without prejudice to refiling after the Corps has issued its revised Master Manual. In the alternative, the Court should grant Florida leave to file, but stay or provide for tailoring of any further proceedings until the Corps has issued the revised Master Manual. The United States recommends the former disposition.

I. FLORIDA'S COMPLAINT ALLEGES A CONTROVERSY SUFFICIENT TO INVOKE THE COURT'S ORIGINAL JURISDICTION

This Court has original and exclusive jurisdiction over a justiciable case or controversy between States. See U.S. Const. Art. III, § 2, Cl. 2; 28 U.S.C. 1251(a). The Court has determined that its exercise of this exclusive jurisdiction is "obligatory only in appropriate cases." *Mississippi* v. *Louisiana*, 506 U.S. 73, 76 (1992) (quoting *Illinois* v. *City of Milwaukee*, 406 U.S. 91, 93 (1972)); see *Nebraska* v. *Wyoming*, 515 U.S. 1, 8 (1995); *Texas* v. *New Mexico*, 462 U.S. 554, 570 (1983). When deciding whether to exercise its exclusive original jurisdiction, the Court examines "the nature of the interest of the complaining State," "focusing on the seriousness and dignity of the claim." *Mississippi* v. *Louisiana*, 506 U.S. at 77 (internal quotation marks and citations omitted). The Court also considers "the availability of an alternative forum in which the issue tendered can be resolved." *Ibid.* In analyzing those considerations, the Court has "substantial discretion to make case-by-case judgments as to the practical necessity of an original forum in this Court for particular disputes within [the Court's] constitutional original jurisdiction." *Texas* v. *New Mexico*, 462 U.S. at 570. Applying those standards, Florida's complaint

presents a controversy of sufficient importance to invoke this Court's original jurisdiction.

A. In claiming that Georgia is depriving Florida of its equitable share of the water of an interstate stream, Florida asserts a substantial sovereign interest that falls squarely within the traditional scope of this Court's original jurisdiction. See, *e.g.*, *Montana* v. *Wyoming*, 131 S. Ct. 1765 (2011); *Texas* v. *New Mexico*, 462 U.S. at 567-568; *Arizona* v. *California*, 373 U.S. 546 (1963); *Nebraska* v. *Wyoming*, 325 U.S. 589 (1945); *Wyoming* v. *Colorado*, 298 U.S. 573 (1936); *Kansas* v. *Colorado*, 185 U.S. 125 (1902). The Court has recognized that it has "a serious responsibility to adjudicate cases where there are actual, existing controversies over how interstate streams should be apportioned among States." *Arizona* v. *California*, 373 U.S. at 564.

Florida alleges that Georgia is storing and consuming more than its fair share of the Basin's waters (Compl. paras. 1, 50), that Georgia intends to increase storage and consumption (*id.* paras. 7, 45, 59), and that Georgia's storage and consumption currently harm Florida and will further harm Florida in the future on account of reduced freshwater flows in the Apalachicola (*id.* paras. 7, 45, 54-56, 58-59). Specifically, Florida alleges that Georgia's storage and consumption have contributed to a collapse of Florida's oyster industry and the destruction of thousands of members of threatened and endangered species, which is harming the ecosystem and the economy of the Apalachicola region (*id.* paras. 1, 6-7, 43-45, 54-56, 58), and that those harms will intensify as Georgia's water use increases (*id.* paras. 7, 45, 59).

Those allegations are sufficient to form a properly framed equitable apportionment suit. Allegations that one State is preventing another State from obtaining its equitable share of the waters of an interstate stream present a controversy that is of sufficient "seriousness and dignity," *Mississippi* v. *Louisiana*, 506 U.S. at 77 (quoting *Illinois* v. *City of Milwaukee*, 406 U.S. at 93), to warrant the exercise of this Court's jurisdiction. See, *e.g.*, *South Carolina* v. *North Carolina*, 558 U.S. 256, 259 (2010).

Georgia contends (Br. in Opp. 25-31) that Florida has insufficiently pleaded injury. In the early stages of equitable apportionment proceedings, however, the Court has focused on the *nature* of the injury alleged, not on the likelihood that the complaining State will be able to prove that injury. See *Kansas* v. *Colorado*, 185 U.S. at 145 (overruling demurrer and noting that the Court will not subject an equitable apportionment complaint to "minute criticism" at the pleading stage). Although the Court might take into account in quantifying each State's equitable apportionment that Florida has not established any harm to consumptive uses in Florida (see Br. in Opp. 28), the alleged injuries to Florida's economy and ecology are sufficient to invoke the Court's original jurisdiction. Furthermore, although one result of the proceedings Florida seeks could be that the Court determines Florida has not proved an injury sufficient to warrant an equitable decree at all, see *Idaho* v. *Oregon*, 462 U.S. 1017, 1027 (1983), Florida has sufficiently pleaded an injury at this initial stage. Cf. *Ashcroft* v. *Iqbal*, 556 U.S. 662, 678 (2009) (complaint must allege "sufficient factual matter" that, if "accepted as true," would "state a

claim to relief that is plausible on its face") (citation omitted).

Congress has recognized the need for an equitable apportionment of the ACF Basin, first in 1997 when it consented to the ACF Compact, see § 1, 111 Stat. 2219, and more recently in the Water Resources Reform and Development Act of 2014, Pub. L. No. 113-121, § 1051(a), 128 Stat. 1259. The 2014 Act states that the respective Senate and House Committees recognize that "th[e] ongoing water resources dispute" in the ACF Basin "raises serious concerns related to the authority of the [Corps] to allocate substantial storage at projects to provide local water supply pursuant to the Water Supply Act of 1958 absent congressional approval." *Ibid.* The 2014 Act declares that "[i]nterstate water disputes of this nature are * * * properly addressed through interstate water agreements that take into consideration the concerns of all affected States including impacts to other authorized uses of the projects," and that the responsible Committees "strongly urge the Governors of the affected States to reach agreement on an interstate water compact as soon as possible." *Ibid.* The 1997 Compact and the 2014 Act undermine Georgia's contention that Florida's alleged injuries are not substantial enough to warrant equitable apportionment proceedings.

B. There is no alternative forum in which this precise legal dispute can be definitively resolved. No other court, state or federal, can adjudicate an apportionment of waters among States. See U.S. Const. Art. III, § 2, Cl. 2; 28 U.S.C. 1251(a); *Mississippi* v. *Louisiana*, 506 U.S. at 77-78.

The parties could agree to an equitable apportionment through an interstate compact that is approved by Congress, see U.S. Const. Art. I, § 10, Cl. 3, as the States attempted in 1997 and Congress has urged this year. But Florida has detailed the States' unsuccessful efforts to reach such an agreement in the past and asserts that agreement is not possible, Compl. paras. 8-12, and Georgia in its response does not contend that negotiation of an interstate compact is likely to resolve this dispute.

II. THE COURT SHOULD POSTPONE EQUITABLE APPORTIONMENT PROCEEDINGS UNTIL THE CORPS OF ENGINEERS COMPLETES ITS REVISION OF THE MASTER MANUAL FOR THE APALACHICOLA-CHATTAHOOCHEE-FLINT RIVER BASIN

An equitable apportionment of an interstate river basin is not a simple undertaking. The factual issues involved can implicate complex matters of hydrology, geology, engineering, and economics, applied to great expanses of varied terrain and water uses. See *Nebraska* v. *Wyoming*, 325 U.S. at 618. Discovery, trial preparation, and trial concerning those issues is time-consuming and expensive. Although Florida's complaint states a claim that fits squarely within this Court's original jurisdiction, practical considerations counsel against this Court's resolution of Florida's claims before the Corps has completed its process of revising the Master Manual for the ACF Basin.

A. 1. The Corps' manual update process will define flow regimes intended to achieve federal project purposes in accordance with the Corps' statutory responsibilities. Two project purposes are directly implicated by Florida's complaint. For the first time, the revisions to the Master Manual will address re-

leases from Buford Dam to meet the federally authorized purpose of providing water supply to the Atlanta metropolitan area, in accordance with the Eleventh Circuit's decision in *In re MDL-1824 Tri-State Water Rights Litigation*, 644 F.3d 1160, 1186-1193 (2011), cert. denied, 133 S. Ct. 25 (2012). The Corps will determine whether and to what extent to meet Georgia's water supply storage request. *Scoping Report* 139.

In the manual update process, the Corps will also comply with its responsibility under the Endangered Species Act to consult with the Fish and Wildlife Service to evaluate the impact of various flow regimes from Woodruff Dam into the Apalachicola. The Fish and Wildlife Service has previously concluded that the current flow regime at Woodruff Dam—which requires minimum flow releases matching basin inflow when that inflow is between 5,000 and 10,000 cubic feet per second and a minimum flow of 5,000 cubic feet per second during times of drought—will not jeopardize the existence of any threatened or endangered species. *Scoping Report* 9; see Br. in Opp. App. 2a-36a. But as new information is collected in the manual revision process, that minimum flow regime may change.

The 1946 Act also specifies other purposes for the federal projects, such as hydropower generation and facilitating navigation, including naviagation in the Apalachicola River in Florida. The Corps' determination of the amounts of water needed to satisfy the various federal statutory purposes of its projects, including the minimum flow required at Woodruff Dam, should be taken into account in any equitable apportionment between the States.

Furthermore, the Corps' ongoing administrative process involves significant factual development concerning water resources in the ACF Basin, including the modeling and evaluation of the impact of alternate modes of project operation on socioeconomics, water resources, and biological resources throughout the Basin. See *Scoping Report* 139. The Corps' process will thus encompass much of the factual development and assessment that would ordinarily be conducted by a Special Master in equitable apportionment proceedings. See *Nebraska* v. *Wyoming*, 325 U.S. at 618.

To be sure, the United States does not own the water in the ACF Basin and the Corps has no authority to apportion water among States or determine water rights. That is not a part of the manual revision process in which the Corps is engaged, and this Court is thus ultimately the appropriate body to address Florida's pending claims. See Part I, *supra*. But the Corps does implement statutes enacted by Congress to accomplish specified federal purposes on this interstate river system. See *Arizona* v. *California*, 373 U.S. at 565 (equitable apportionment must give way where Congress has "exercised its constitutional power over waters"); *United States* v. *Commodore Park, Inc.*, 324 U.S. 386, 391 (1945) (noting "government's 'absolute' power, in the interests of commerce, to make necessary changes in a stream") (footnote and citation omitted). Permitting the Corps to complete its process for implementing the statutes it administers will provide the Court with relevant information about the hydrology of the Basin and the Corps' view of how the federal projects should be operated to satisfy the various purposes for which they were authorized by Congress. It would be premature, before

the Corps has completed its manual revision process, to decide in the abstract what effect should be given in an equitable apportionment action to the various federal statutory purposes or the Corps' assessment of the appropriate manner in which to balance and accomplish those purposes.

2. Furthermore, the extent of Florida's alleged injury could change after the Master Manual update is complete. The Florida Department of Environmental Protection submitted comments during the Corps' scoping process that addressed Georgia's water supply request and the flow rate at Woodruff Dam. *Scoping Report* 107-112. After modeling the ACF Basin, Florida developed its own proposed reservoir operating regime and presented it to the Corps for consideration. *Id.* at 111. Florida also urged the Corps to evaluate available measures to protect inflow to Florida when considering Georgia's request for water supply storage in Lake Lanier. *Id.* at 112. The Corps is considering Florida's comments as it evaluates multiple alternative operating regimes for the federal projects. If the Corps adopts Florida's proposed flow regime, in whole or in part, then the Master Manual revision could address some or all of Florida's concerns about flows in the Apalachicola.

3. As a practical matter, the Corps has a strong interest in completing its Master Manual revision uninterrupted by continued litigation distractions. Florida insists that it is not seeking relief against the Corps. Compl. para. 15. But if this case proceeds, the United States would need to decide whether intervention would be appropriate to protect the statutory purposes of the federal projects in the ACF Basin, and the United States would at a minimum remain actively

involved in these proceedings as amicus curiae to protect those federal interests. Allowing the Corps to complete its administrative process free from the distractions and restraints that are inherent in active litigation would benefit the Corps, the States, and ultimately this Court.

4. Under the doctrine of primary jurisdiction, a federal court may stay proceedings while an administrative agency addresses a matter "within the special competence of [the] administrative body." *United States* v. *Western Pac. R.R.*, 352 U.S. 59, 64 (1956). That doctrine counsels courts to "refer the initial determination to the regulatory agency where it may benefit from the agency's expertise and insight, and to ensure uniformity." *Williams Pipe Line Co.* v. *Empire Gas Corp.*, 76 F.3d 1491, 1496 (10th Cir. 1996). Similarly, in an action for equitable relief, principles of ripeness counsel postponement of a suit when the matter is not yet suitable for judicial proceedings because, *inter alia*, a federal agency has not yet reached a final decision on a relevant matter. See *Abbott Labs.* v. *Gardner*, 387 U.S. 136, 145-149 (1967). By analogy to the doctrine of primary jurisdiction and drawing on principles of ripeness—and taking into consideration this Court's "substantial discretion to make case-by-case judgments as to the practical necessity of an original forum in this Court," *Texas* v. *New Mexico*, 462 U.S. at 570—a postponement in these equitable apportionment proceedings is warranted. Put another way, this is not yet an "appropriate" case for the exercise of the Court's exclusive original jurisdiction. See *Mississippi* v. *Louisiana*, 506 U.S. at 76.

B. There are several different approaches the Court could take that would account for the practical considerations described above. The Court could (i) deny Florida leave to file its complaint without prejudice to refiling after the Corps has issued the final revised Master Manual for the ACF Basin; (ii) grant Florida leave to file its complaint, but stay any further proceedings until the Corps has issued the revised Master Manual; or (iii) grant Florida leave to file its complaint and refer the complaint to a Special Master with instructions to structure the equitable apportionment proceedings in a manner that minimizes interference with the manual revision process.

As noted above (pp. 9-10, *supra*), the Corps expects to release a draft Master Manual and an environmental impact statement in September 2015, and it expects final approval and implementation of the Master Manual in March 2017. Under the first two approaches outlined above, a postponement of these proceedings could thus be expected to last for less than three years. In the United States' view, there is little practical difference between those first two approaches.

Alternatively, it may be possible to structure equitable apportionment proceedings in a way that avoids or minimizes interference with or duplication of the manual revision process and allows for full consideration of the Corps' revised Master Manual when it is adopted in final form. For example, Georgia has indicated that, if Florida is granted leave to file its complaint, Georgia would seek to file "a prompt motion to dismiss the complaint" on the grounds that Florida's requested relief cannot remedy the harm it has alleged, that the Corps is a required party that has not been joined, and that Florida has not alleged an injury

caused by Georgia that is sufficient to justify the Court's original jurisdiction. See Br. in Opp. 31 n.20. A Special Master could order briefing on this or other pretrial motions, and those motions could be considered in due course while the Corps completes the Master Manual revision.

Furthermore, an equitable apportionment of the waters in the ACF Basin presumably would involve factfinding concerning the Flint as well as the Chattahoochee River. Other than Woodruff Dam, which impounds the flow of the Flint at the Georgia-Florida state line, there are no federal projects on the Flint. Accordingly, if Georgia did not file pretrial motions, or if such motions were resolved before the Corps has finished its administrative process, the parties could conduct discovery on the Flint pending the Corps' completion of the Master Manual revision.

Although commencing equitable apportionment proceedings while the Corps is still in the process of revising the Master Manual would be possible, the United States believes on balance that postponing the proceedings until after the Corps' administrative process is complete would be the preferable course, so that Florida's injuries, and the need for and scope of any equitable decree, can be more fully evaluated in light of the Corps' decisions about project operations in the Basin.

CONCLUSION

The Court should deny Florida leave to file its complaint without prejudice to refiling after the Corps has issued a revised Master Manual for the ACF Basin. In the alternative, the Court should grant Florida leave to file, but stay or provide for tailoring of any

further proceedings until the Corps has issued the revised Master Manual.

Respectfully submitted.

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No. 142, Original

In the Supreme Court of the United States

STATE OF FLORIDA, PLAINTIFF

v.

STATE OF GEORGIA

ON EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER

BRIEF FOR THE UNITED STATES AS AMICUS CURIAE IN SUPPORT OF OVERRULING FLORIDA'S EXCEPTION 2C TO THE REPORT OF THE SPECIAL MASTER

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QUESTION PRESENTED

The United States will address the following question:

Whether the Special Master erred in concluding that the discretion of the United States Army Corps of Engineers (Corps) in operating its system of dams in the Apalachicola-Chattahoochee-Flint river basin precludes a finding of redressability. (Florida Exception No. 2c).

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INTEREST OF THE UNITED STATES

This is an original action brought by the State of Florida against the State of Georgia seeking an equitable apportionment of the waters of the Apalachicola-Chattahoochee-Flint river basin (ACF Basin). The United States Army Corps of Engineers (Corps) operates five federal dams in the ACF Basin for purposes authorized by Congress. The Special Master has concluded that Florida failed to show that its requested relief—a cap on Georgia's consumption of water—would afford adequate relief to Florida without the Corps' participation as a party in this case. Because the Corps' operational protocols for its system of dams in the ACF Basin played a pivotal role in the Special Master's recommendation, the United States submits this brief to ensure that the Court understands those proto-

cols. The United States also has an interest in protecting the Corps' ability to operate its system of dams in the ACF Basin for congressionally authorized purposes and in compliance with other federal statutes. At the Court's invitation, the United States filed a brief as amicus curiae addressing Florida's motion for leave to file a bill of complaint.

STATEMENT

Florida initiated these proceedings by requesting leave to file a complaint against Georgia seeking an equitable apportionment of the waters of the ACF Basin. Compl. ¶ 1. This Court granted Florida leave to file its complaint, 135 S. Ct. 471, and appointed Ralph I. Lancaster, Jr., to serve as the Special Master, 135 S. Ct. 701. In the course of the proceedings, Florida has limited its request for relief to a cap on Georgia's consumption of water. Compl. p. 21 (prayer for relief); Docket entry No. 128, at 10 (June 19, 2015) (explaining that Florida disclaimed any request for a decree that would require a minimum flow at the state line). Special Master Lancaster (the Master) has submitted a Report recommending that the Court deny Florida's request for relief. Report of the Special Master 69-70 (Feb. 14, 2017) (Report or Rep.). The Master concluded that Florida did not prove by clear and convincing evidence that a cap on Georgia's consumption "would provide a material benefit to Florida" during times of drought because the Corps could store increased basin inflow in reservoirs on the Chattahoochee River instead of passing additional water through to Florida. *Ibid.*

The United States files this brief as amicus curiae to provide the Court with a description of the Corps' past and current operational protocols for its system of dams in the ACF Basin. The United States also addresses

Florida's contention that, if this Court entered a decree imposing a cap on Georgia's consumption, the Corps would be likely to provide Florida with additional flows produced by such a cap—either within its existing operational protocols or by altering its operational protocols to do so.

A. The Apalachicola-Chattahoochee-Flint River Basin

The Chattahoochee River originates in north Georgia, flows southwest past Atlanta, and then flows south along Georgia's border, first with Alabama, then with Florida. At Georgia's southwest corner, the Chattahoochee joins the Flint River, which originates south of Atlanta and flows through central Georgia. The Chattahoochee and the Flint join to form the Apalachicola River, which flows south through northwest Florida and into the Apalachicola Bay in the Gulf of Mexico. Rep. App. B1 (map). The ACF Basin drains more than 19,500 square miles in Georgia, Alabama, and Florida. 1 U.S. Army Corps of Eng'rs, *Final Environmental Impact Statement, Update of the Water Control Manual for the Apalachicola-Chattahoochee-Flint River Basin in Alabama, Florida, and Georgia and a Water Supply Storage Assessment* 1-1 (Dec. 2016) (*Final EIS*).[1]

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[1] On March 30, 2017, the Corps implemented an updated Master Water Control Manual for the ACF Basin and updated individual reservoir regulation manuals for each federal project in the Basin. The updated manuals and supporting documents, including the Final EIS, are available at http://www.sam.usace.army.mil/Missions/Planning-Environmental/ACF-Master-Water-Control-Manual-Update/ACF-Document-Library/.

B. Federal Projects In The ACF Basin

In 1939, the Corps transmitted a report to Congress recommending development of the ACF Basin for multiple purposes, including navigation, hydroelectric power, national defense, commercial value of riparian lands, recreation, and industrial and municipal water supply. H.R. Doc. No. 342, 76th Cong., 1st Sess. 77 (1939). Congress approved the Corps' plan in the River and Harbor Act of 1945, ch. 19, § 2, 59 Stat. 17. In 1946, the Corps recommended several changes to the original plan, including moving one of the proposed hydropower generating dams further upstream from Atlanta to Buford, Georgia. H.R. Doc. No. 300, 80th Cong., 1st Sess. 27-28 (1947). Congress authorized the modified plan in the River and Harbor Act of 1946, ch. 595, § 1, 60 Stat. 635. In 1962, Congress authorized the construction of an additional dam at West Point, Georgia. See Flood Control Act of 1962, Pub. L. No. 87-874, Tit. II, § 203, 76 Stat. 1182.

The Corps currently operates five federal dams in the ACF Basin for the purposes authorized by Congress. The northernmost dam is Buford Dam, on the Chattahoochee north of Atlanta, which forms Lake Sidney Lanier. Next is West Point Dam, followed by Walter F. George Dam and then George W. Andrews Dam, each of which is located on the Chattahoochee along the Georgia-Alabama border. The southernmost dam is Jim Woodruff Dam, which is at the confluence of the Flint and Chattahoochee Rivers and forms Lake Seminole. Water released from Woodruff Dam flows south into the Apalachicola River in Florida. Rep. App. B1, C1 (maps); see *Final EIS* 2-25.

The Corps operates the system of dams in the ACF Basin pursuant to a Master Water Control Manual

(Master Manual) governing all federal projects in the ACF Basin and separate reservoir regulation manuals for each individual project. In addition to operating the dams to accomplish their congressionally authorized purposes, the Corps operates the system to comply with the Endangered Species Act of 1973 (ESA), 16 U.S.C. 1531 *et seq.*, and other federal statutory requirements. See, *e.g.*, Fish and Wildlife Coordination Act, 16 U.S.C. 661-667c; Water Supply Act of 1958, 43 U.S.C. 390b (2012 & Supp. III 2015); Flood Control Act of 1944, 16 U.S.C. 460d, 33 U.S.C. 708. An updated Master Manual and updated project-specific manuals for each federal project in the ACF Basin were implemented on March 30, 2017. See note 1, *supra*.

1. Operating procedures under the 2012 Revised Interim Operations Plan

Until the recent adoption of the revised Master Manual and reservoir regulation manuals in March of this year, the Corps operated pursuant to manuals first adopted in 1958 and a series of interim operating plans reached in consultation with the Fish and Wildlife Service under the ESA to protect the threatened Gulf sturgeon and three threatened or endangered species of mussels in the Apalachicola River and adjacent waters in Florida. See *Final EIS* 2-63 to 2-64, 2-72 to 2-73. Before the Master, the parties presented evidence based on the latest iteration of the interim operating plan, the 2012 Revised Interim Operations Plan (RIOP). *Id.* at 2-72 to 2-77. The basic framework of the RIOP has been carried forward in the Master Manual issued in March 2017. Thus, although the RIOP is no longer in effect, its provisions are relevant to the Master's recommendation.

The RIOP guided the Corps' coordinated operations and releases from its system of dams in the ACF Basin to produce flows from Woodruff Dam. *Final EIS* 2-72 to 2-77. The RIOP set the minimum flow levels from Woodruff Dam under varying conditions, as well as the maximum fall rate, which is the maximum daily vertical drop in river stage for the Apalachicola River as flows are reduced. The maximum fall rate is designed to protect the species downstream of Woodruff Dam that are listed under the ESA. *Id.* at 2-73; see p. 10, *infra*. Under the RIOP, the Corps' decisions to release water from upstream reservoirs to achieve a particular minimum flow from Woodruff Dam were keyed to three variables: the time of year, the combined amount of water in the Corps' reservoirs, and the current Basin inflow. *Final EIS* 2-73.

There were three seasons under the RIOP—spawning (March-May), non-spawning (June-November), and winter (December-February). *Final EIS* 2-73. In general, the guide curves of the RIOP, which are unchanged in the revised Master Manual, represent the desired surface elevation of the reservoirs at a given point in time. *Id.* at 2-25. The guide curves prescribed lower reservoir levels in the winter and spring to maintain capacity for flood control, and higher levels in the summer. *Id.* at 2-65 to 2-67, 4-10 to 4-11. The refill period ran from late winter into the spawning season, and the drawdown period began in the fall. *Id.* at 2-66.

The second factor governing the Corps' release decisions under the RIOP was the amount of usable water in the system. *Final EIS* 2-73. Each of the three reservoirs with significant storage capacity—Lake Lanier, West Point Lake, and Walter F. George Lake—is divided into storage pools that are distinguished by their

elevation above sea level. *Id.* at 2-73 to 2-74. At the top of Lake Lanier and West Point Lake is flood storage, which is usually empty, and at the bottom of all three reservoirs is the inactive pool, which is generally not used to meet project purposes. See *id.* at 2-25, 2-28, 2-35.[2] In the middle is the conservation storage pool, which is used to meet all project purposes other than flood risk management. *Ibid.*

Because the Corps operates its reservoirs as an integrated system, it used what is called "Composite Conservation Storage" to make release decisions under the RIOP. *Final EIS* 2-73. Composite Conservation Storage is calculated by combining the conservation storage —again, the storage pools used to meet project purposes other than flood control—of Lake Lanier, West Point Lake, and Walter F. George Lake. *Ibid.* That system-wide Composite Conservation Storage is divided into four operational zones, based on the elevation of the water level and the time of year. *Id.* at 2-25, 2-73, 5-52 to 5-54. The Composite Conservation Storage Zones are derived by adding the conservation storage available in each zone for each of the three storage reservoirs. *Id.* at 2-73. That total is used to determine which of the Composite Conservation Storage Zones the overall system is in. Below Composite Conservation Storage Zone 4 is the Drought Zone (roughly equivalent to the inactive storage in Lake Lanier, West Point Lake, and Walter F. George Lake, plus Zone 4 storage in Lake Lanier). *Ibid.*

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[2] Walter F. George Lake does not have a formally designated flood-control pool, but the Corps has historically drawn down that reservoir as well to provide capacity for flood risk management in the winter months. *Final EIS* 2-40, 2-42.

The third factor governing the Corps' release decisions is the basin inflow above Woodruff Dam. *Final EIS* 2-73. "Basin [i]nflow" is defined as the amount of water that would flow by Woodruff Dam if all of the Corps' upstream reservoirs were kept at their then-existing surface elevation. *Id.* at 4-27. Basin inflow thus "reflects the influences of reservoir evaporative losses, inter-basin water transfers, and consumptive water uses" upstream of Woodruff Dam. *Ibid.* Accordingly, basin inflow will vary as consumptive water-use rates change. The Corps estimates basin inflow daily, and the RIOP (like the revised Master Manual) used a seven-day moving average of daily basin inflow calculations for daily release decisions. *Id.* at 2-73, 5-60; see U.S. Army Corps of Eng'rs, *Finding of No Significant Impact, Revised Interim Operations Plan for Support of Endangered and Threatened Species, Jim Woodruff Dam, Gadsden and Jackson Counties, Florida and Decatur County, Georgia* EA-24 to EA-25 (May 22, 2012).[3]

A table from the Final EIS for the Master Manual that summarizes the RIOP's minimum-discharge schedule for Woodruff Dam, applying those three factors, is included in an appendix to this brief. App., *infra*, 1a; see *Final EIS* 2-73.[4] The various flow rates included in the table are minimum flow rates and not targets. *Final EIS* 2-75. The Corps may release more water from upstream dams than the amount necessary to

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[3] Available at www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/docs/May2012RIOP-EA.pdf.

[4] A substantially similar table appears in the record at JX124, Tbl. 2.1-5. A list of trial exhibits appears at Docket entry No. 532 (Oct. 26, 2016). Docket entries for the proceedings before the Master are available at https://www.pierceatwood.com/florida-v-georgia-no-142-original.

make the minimum releases from Woodruff Dam to further other project purposes, such as to generate hydropower, to prevent the fall rate from exceeding the maximum, to preserve the structural integrity of the projects, in response to an emergency, or in the interests of flood risk management. *Id.* at 2-60 to 2-61, 2-75, 5-56; see U.S. Fish & Wildlife Serv., *Biological Opinion on the U.S. Army Corps of Engineers, Mobile District, Revised Interim Operations Plan for the Jim Woodruff Dam and Associated Releases to the Apalachicola River* 9-10 (May 22, 2012).[5]

Under the RIOP, the amount of water released and stored varied with basin inflow as long as the reservoirs remained in Composite Conservation Storage Zones 1-3. *Final EIS* 2-74. Once the Composite Conservation Storage fell below the top of Zone 4, the Corps began drought operations on the first of the following month. *Ibid.* The term "drought operations" refers to more conservative operations that are intended to enable the Corps to preserve water and operate its reservoir projects more effectively as drought conditions arise. *Id.* at 6-99. Under the RIOP's drought operations, the Corps maintained a minimum release from Woodruff Dam of 5000 cubic feet per second (cfs) and could store up to 100% of basin inflow above that amount, regardless of season, until Composite Conservation Storage rose into Zone 1. *Id.* at 2-76. The 5000 cfs minimum release was determined in consultation with the Fish and Wildlife Service to protect the threatened Gulf sturgeon and three species of threatened or endangered mussels pursuant to the ESA. *Id.* at 2-72 to 2-73.

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[5] Available at www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/docs/Final_RIOP_EA_Appendix_A_5-22-12.pdf.

The RIOP also established maximum fall rates, *i.e.*, the maximum vertical drop in river stage from day to day, *Final EIS* 2-73, to protect mussels that live in shallow water from becoming stranded by fluctuations in water level that occur too quickly, *id.* at 2-211, 6-344. Maximum fall rates during drought operations were suspended after the flow rate at Woodruff Dam reached 5000 cfs, which allowed the Corps, for example, to continue to store water after locally significant rainfall events raised the stage of the river. *Id.* at 2-75 to 2-76. Fall rates under drought operations instead were managed to match the fall rate of the basin inflow. *Id.* at 2-75. When Composite Conservation Storage fell into the Drought Zone, the minimum release from Woodruff Dam was 4500 cfs and any basin inflow above 4500 cfs could be stored. *Id.* at 2-76.

Once Composite Conservation Storage rose back to the bottom of Zone 1, drought operations ceased and normal operations under the RIOP resumed. *Final EIS* 2-76. When the reservoir levels were at the top of Zone 1—the levels at which the Corps would ideally keep the reservoirs—any additional inflow would be passed through to maintain capacity in the reservoirs for flood control. *Id.* at 2-65 to 2-66.

2. *The current Master Manual*

The Corps recently completed the administrative process for updating the Master Manual and the individual reservoir regulation manuals. See note 1, *supra*. The record of decision adopting the new manuals was signed on March 30, 2017. See U.S. Army Corps of Eng'rs, *Record of Decision, Apalachicola-Chattahoochee-Flint River Basin Master Water Control Manual Update and Water Supply Storage Assessment, Alabama, Florida, and Georgia* (*Record of Decision*). The Master

Manual retains the same basic framework as the RIOP, with a few alterations. First, the Corps redefined both the action zones within each reservoir and the composite action zones. *Final EIS* 5-52. Second, drought operations no longer begin at the top of Zone 4. Instead, on the first of each month, the Corps will initiate drought operations if Composite Conservation Storage falls into Zone 3. *Id.* at 5-54. As under the RIOP, maximum fall rates are suspended after flow at Woodruff Dam reaches 5000 cfs during drought operations. *Ibid.* Finally, the Master Manual also suspends the maximum fall rates in times of prolonged low flows, defined to mean 30 consecutive days of flows at Woodruff Dam of 7000 cfs or lower, even if drought operations have not been triggered. *Id.* at 5-62. Fall rates under drought operations and prolonged low-flow operations instead are managed to match the fall rate of the basin inflow. *Ibid.*

The changes to drought operations in the Master Manual reflect "a more proactive approach to conserve reservoir storage as drier conditions develop in the basin, while continuing to meet downstream commitments and needs." *Final EIS* 6-99; see *id.* at 6-99, Tbl. 6.1-13; *id.* at 6-102 to 6-103. Storage of water during drought operations is critically important to retain sufficient water in the system "to ensure that project purposes can at least be minimally satisfied" if the drought conditions persist. *Id.* at 5-51. The revised drought operations "could trigger slightly constrained operations more frequently and over slightly longer periods, and the extent of those constrained operations would gradually increase only as worsening drought conditions may dictate over time." *Id.* at 6-99. The Master Manual is projected to trigger drought operations, and the flows they

require, 11% more often than the RIOP. *Id.* at 6-100, Tbl. 6.1-14. But at the same time, the Master Manual is projected to reduce the total amount of time the reservoirs are in Zones 3 and 4, and "Composite conservation storage values for the reservoirs would tend to remain higher for a greater portion of the modeled period." *Id.* at 6-102.

Overall, the Corps determined that operations under the Master Manual are "likely to have no appreciable incremental effect on flow conditions in the Apalachicola River compared to the [RIOP]" and no more than "negligible effects" on estuarine fish and aquatic resources in the Apalachicola Bay. *Final EIS* 6-93, 6-324 to 6-325, Tbl. 6.4-6. Low-flow periods would be increased slightly because the percentage of days in which flows in the Apalachicola are greater than or equal to 6000 cfs would be reduced from 95.8% to 95.3%. *Id.* at 6-93, Tbl. 6.1-12. Conversely, the number of days in which the flows would be greater than 12,000 and 16,000 cfs are expected to increase. *Ibid.*

A table from the Final EIS for the new Master Manual describing the operational procedures for releases from Woodruff Dam is included in the appendix to this brief. App., *infra*, 2a; see *Final EIS* 5-61.

C. Proceedings In This Original Action

1. In 2013, Florida sought leave to file this original action to obtain an equitable apportionment of the waters of the ACF Basin. Compl. ¶ 1 & p. 21 (prayer for relief). In particular, Florida sought an order "capping Georgia's overall depletive water uses at the level then existing on January 3, 1992." Compl. p. 21. Georgia opposed the filing of the complaint.

At the Court's invitation, the United States filed a brief as amicus curiae on September 18, 2014, recommending that the Court deny Florida leave to file its complaint without prejudice to refiling after the Corps had completed the then-ongoing process to revise the Master Manual for the ACF Basin. U.S. Amicus Br. 1, 17-24. The United States' brief described the Corps' efforts to update the Master Manual, which had been interrupted by litigation on multiple occasions. *Id.* at 8-10. Alternatively, the United States recommended that if the Court granted Florida leave to file, the Court should stay or provide for tailoring of any further proceedings until the Corps completed its process of updating the Master Manual. *Id.* at 1, 22-24. The United States advised the Court that it expected to complete the Master Manual update by March 2017, *id.* at 9-10, 22.

On November 3, 2014, the Court granted Florida leave to file its complaint. 135 S. Ct. 471.

2. After the case was referred to the Master, Georgia moved to dismiss the complaint for failure to join the United States as a required party under Federal Rule of Civil Procedure 19. Docket entry No. 48 (Feb. 16, 2015). The United States filed a brief as amicus curiae opposing Georgia's motion. Docket entry No. 66 (Mar. 11, 2015). In that brief, the United States explained that it is a required party given the extensive federal regulation of the Chattahoochee River, but that it could not be joined because its sovereign immunity had not been waived. *Id.* at 7-9. Nevertheless, the United States concluded that the case could proceed in equity and good conscience. *Id.* at 10-22; see Fed. R. Civ. P. 19(b). Florida made clear to the Master that it was seeking only a cap on Georgia's consumption and disclaimed any request for a decree that would require a minimum flow

at the state line, the location of Woodruff Dam, which would directly affect the Corps' operations. Docket entry No. 128, at 9-10. The United States explained that it could not "say at th[at] juncture, without further factual development, that Florida will not be able to receive any minimum flow that might be adjudicated entirely through the imposition of a consumption cap on Georgia that does not affect the Corps' operation of the projects." Docket entry No. 66, at 19. "If it can," the United States explained, "then the case may proceed to judgment without the United States." *Ibid.*

The Master denied Georgia's motion to dismiss. Docket entry No. 128, at 25. The Master concluded that the United States was a required party because there was a "real possibility that a judgment might impede the United States' ability to protect its interest in managing the flow of water in the Chattahoochee River." *Id.* at 9 (brackets, citation, and internal quotation marks omitted). The Master further concluded, however, that the case could proceed because it might be possible for the Court to shape relief, in particular by entering a cap on Georgia's consumption, that would not require any alteration of the Corps' operations. *Id.* at 12-20. The Master observed that Florida's strategy to request a consumption cap instead of a minimum flow requirement, which "sidestep[s] the need to join the United States as a party," may be a two-edged sword. *Id.* at 12-13 (citing *Idaho* v. *Oregon*, 444 U.S. 380, 392 (1980)). The Master explained that, "[h]aving voluntarily narrowed its requested relief and shouldered the burden of proving that the requested relief is appropriate, * * * Florida's claim will live or die based on whether Florida

can show that a consumption cap is justified and will afford adequate relief." *Id.* at 13.[6]

3. a. After extensive discovery, the Master held a five-week trial. Rep. 17. Florida's evidence focused primarily on demonstrating that a rise in agricultural withdrawals on the Flint River, which is unregulated by the Corps, caused injury to Florida in both the Apalachicola River and Bay. Rep. 31-34; see Fla. Exceptions Br. 14-17. Florida thus sought to cap Georgia's consumption of water on the Flint River to increase its flow, which Florida contended would result in increased flow in the Apalachicola River. Rep. 46-47. The parties sharply disputed, with conflicting expert testimony, whether additional flow in the Flint River produced by a consumption cap in fact would increase the flow of the Apalachicola River, or whether additional flow in the Flint would instead be "offset" by the Corps' operation of the federal projects on the Chattahoochee River under the criteria in the Master Manual. Rep. 47-69. The evidence at trial pertaining to the Corps' operations centered on the 2012 RIOP, which governed the Corps' releases from Woodruff Dam into the Apalachicola River at that time. Rep. 41-45.

b. Toward the end of trial, the Master requested that the United States file a post-trial brief as amicus curiae, "addressing specifically the issue of the Army Corps of Engineers' operations in the ACF River Basin." Docket entry No. 577, at 1 (Dec. 14, 2016). The United States' post-trial amicus brief described the Corps' operating procedures under the RIOP, as well as

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[6] Neither Georgia nor Florida has filed an exception to the Master's order denying Georgia's motion to dismiss, including the limitations on possible relief to Florida on which the order was premised.

the then-proposed operations under the updated Master Manual. Docket entry No. 631 (Dec. 15, 2016).

In addition, the United States provided the Master with a description of the general benefits from increased basin inflow that would result from an increase in streamflow in the Flint River caused by a cap on Georgia's consumption. Docket entry No. 631, at 12-18. In general, the amount of water stored in the Corps' reservoirs is a critical component of calculating the amount of water that will flow into the Apalachicola River. *Id.* at 14. The United States explained that when the Corps has more water available to store during normal operations, then it may be able to delay the onset of drought operations, under which the minimum flow at Woodruff Dam is reduced to 5000 cfs (or 4500 cfs in the Drought Zone). *Id.* at 14-17. And once drought operations begin, if the Corps does not have to release as much water from storage to meet the minimum flow requirement from Woodruff Dam, it may be able to extend the amount of time that it can meet the 5000 cfs minimum flow requirement rather than lowering it to 4500 cfs, as well as shorten how long drought operations persist. *Id.* at 14, 17-18.

Thus, the United States explained, although the opportunity to store more water during drought operations would not immediately increase the flow from Woodruff Dam, reducing the amount of time that the system is in drought operations would increase the amount of time that the Corps operates to provide higher flows into the Apalachicola. Docket entry No. 631, at 14, 17-18. It is therefore likely, the United States concluded, that additional flows on the Flint River resulting from a cap on Georgia's consumption would

reach Florida without any changes in the Corps' operational protocols. It was more a question of timing than whether the flows would reach Florida at all.

To illustrate the likely impact of a consumption cap, the United States provided the Master with a description of how the Corps would implement its operational protocols if there were increased inflow from the Flint River in four specific scenarios, explaining generally how the Corps' operations would treat additional basin inflow under varying conditions, not only during drought operations. Docket entry No. 631, at 16-18. As explained to the Master, those scenarios are useful to illustrate the impact of additional basin inflow as an operational matter, but they are hypotheticals at a snapshot in time to demonstrate how the Corps' protocols work, not attempts to precisely quantify any particular effect on flows in the Apalachicola River from any particular amount of additional water in the Flint River over a period of time. *Id.* at 13.

First, the United States described a scenario of high flows where drought operations had not been initiated. In that scenario, flows in the Apalachicola would likely remain the same if flows on the Flint increased, because the Corps would store more water in the reservoirs on the Chattahoochee—unless the conservation pools of the reservoirs were full, in which case any increased flows on the Flint River would result in increased flows of the same amount in the Apalachicola. Docket entry No. 631, at 16. Second, the United States described a scenario of moderate flow where drought operations had not been initiated, under which the Corps' storage protocols would result in roughly half the amount of any Flint River flow increase flowing into the Apalachicola.

Id. at 16-17. Third, the United States described a scenario where flows were lower but reservoir levels had not yet triggered drought operations, under which flows in the Apalachicola would increase by the amount of increased Flint River flows during spawning and non-spawning season. *Id.* at 18.

Fourth, on the particular question of the Corps' operations during drought, the United States apprised the Master that the operational protocols in existence at the time, as well as those under the then-proposed revised Master Manual, would generally result in the Corps offsetting increased Flint River flows when basin inflows were less than 5000 cfs, including when drought operations have been triggered, by storing more water in reservoirs on the Chattahoochee. Docket entry No. 631, at 17. That increased storage is intended to provide for sufficient water in the system "to ensure that project purposes can at least be minimally satisfied" if the drought conditions persist. *Final EIS* 5-51.

The United States concluded by observing again that storing increased basin inflow during other than drought conditions could provide an additional "cushion," delaying the onset of or hastening the recovery from drought operations. Docket entry No. 631, at 18-19. The United States also reiterated its belief "that a cap on Georgia's consumption would not be likely to adversely affect the Corps' operations." *Id.* at 3 n.1.

Although the United States' post-trial amicus brief was necessarily a general description of how the Corps' operational protocols work in various flow conditions, at trial the Master received expert testimony from both States attempting to model and quantify the timing and

effects on the Apalachicola River of additional basin inflow in particular conditions. In the Report, the Master extensively analyzed that expert testimony. Rep. 46-69.

4. After considering the parties' evidence and the United States' submission, the Master recommended that the Court deny Florida's request for an equitable apportionment. Rep. 1-70. The Master explained that Florida, "as the aggrieved State, must prove 'real and substantial' injury from Georgia's conduct by 'clear and convincing evidence.'" Rep. 29 (quoting *Idaho* v. *Oregon*, 462 U.S. 1017, 1027 (1983)). The Master further concluded that, in addition to bearing the burden to prove injury, "Florida bears the burden to prove [by clear and convincing evidence] that the proposed remedy will provide redress for Florida's injury." Rep. 30; see Rep. 51, 61, 63. That burden required Florida to prove that "any water not consumed by Georgia as the result of a decree imposing a consumption cap will reach Florida and alleviate Florida's injury." Rep. 30.

The Master stated that Florida had identified "real harm and, at the very least, likely misuse of resources by Georgia." Rep. 31. In particular, the Master stated that Florida had suffered harm to the oyster fishery in Apalachicola Bay as a result of increased salinity in the Bay caused by low flows in the Apalachicola River. Rep. 31-32. The Master also observed that Georgia's agricultural water use on the Flint River appears to be "largely unrestrained." Rep. 32.

The Master then observed that "[m]uch more could be said and would need to be said on these issues (as well as other issues, such as causation)" if Florida and Georgia were the only parties whose activities were implicated. Rep. 34. But the Master did not address those issues in any more depth because, even assuming that

Florida had made the requisite showing on those other issues, he concluded that Florida had not carried its burden to show that a consumption cap would redress its injuries. Rep. 32, 34. He determined that Florida had not shown by clear and convincing evidence that "any additional streamflow in the Flint River or in the Chattahoochee River would be released from Jim Woodruff Dam into the Apalachicola River at a time that would provide a material benefit to Florida" (*i.e.*, during dry periods). Rep. 47. Instead, he found that "[t]he evidence instead tends to show that the Corps' operation of federal reservoirs along the Chattahoochee River creates a 'highly regulated system over much of the [B]asin, rendering any potential benefit to Florida from increased streamflow in the Flint River uncertain and speculative." Rep. 47-48 (citation omitted; second set of brackets in original).

The Master considered in particular whether Florida had shown that increased flow would benefit Florida during the Corps' drought operations or periods of low basin inflow. Rep. 48-62. The Master concluded that the analysis by Florida's expert, Dr. Peter Shanahan, who had testified that additional water on the Flint River would reach Florida because it would be physically impossible for the Corps to store enough water on the Chattahoochee River to offset the additional flow on the Flint given the location and size of its reservoirs, contained flaws in its statistical analysis and was outweighed by other evidence. Rep. 49-53.

The Master next considered whether the Corps' operations would actually offset additional flows produced on the Flint River during drought operations or low-flow periods by storing more water in its reservoirs on

the Chattahoochee River. Rep. 53-61. The Master concluded that "[w]hile the evidence presented at trial shows that the Corps retains discretion in its operations, how the Corps will exercise that discretion remains unknown." Rep. 53. The Master found that Florida's "Lake Seminole model," upon which Florida relied to show that the Corps would allow water produced on the Flint River to pass through Woodruff Dam into the Apalachicola without reducing releases from dams on the Chattahoochee, had "programmatic shortcomings and predictive anomalies." Rep. 58. Instead, the Master concluded, the weight of evidence at trial showed that it was uncertain how the Corps would operate the projects during times of drought and low flow. Rep. 58-61.

For example, the Master noted that when flows on the Flint River increased by as much as 2000 cfs at times during a 2012 drought, no corresponding increase in flow in the Apalachicola River was observed, showing that the Corps' operations had in fact offset increased flows in the past. Rep. 59. Because the Corps' operational protocols contemplated storing increased basin inflows during drought operations, the Master determined that there was "no way to predict how the Corps will exercise its discretion" to vary from those protocols. Rep. 61. Thus, the Master concluded that Florida had not established that a decree "will provide relief at the most critical dry periods." *Ibid.* Instead, effective relief for Florida's claimed injury would "likely * * * require modification" of the Corps' operating protocols "and, hence, active participation by the Corps in this proceeding." Rep. 61-62.

Finally, the Master considered whether a consumption cap might have beneficial effects outside of the

Corps' drought operations or periods of low basin inflow sufficient to remedy Florida's injury. Rep. 62-69. The Master noted that Florida had focused at trial on drought years and had not introduced substantial evidence of the benefits from increased annual flows, and had failed to quantify the benefits from shortened drought operations or increased flows outside of drought operations. Rep. 63-65. Georgia, on the other hand, had introduced evidence to show that any such beneficial effects would be minimal. Rep. 65-69.

Ultimately, then, the Master concluded that Florida had failed to prove by clear and convincing evidence that a consumption cap would "provide a material benefit to Florida," and he thus recommended that Florida's request for relief be denied. Rep. 70.

SUMMARY OF ARGUMENT

The Master determined that the Corps' operational protocols permit the Corps to store up to 100% of basin inflow over 5000 cfs during drought operations; that it would be physically possible during drought operations for the Corps to increase storage in its reservoirs on the Chattahoochee River in a manner that would offset any increased flows on the Flint River that might result from a cap on Georgia's consumption; and that the Corps may make releases to achieve flows above the minimum of 5000 cfs from Woodruff Dam during drought operations to serve authorized project purposes. Florida does not object to any of those determinations, and the United States believes that each is sound.

Florida contends, however, that the Master erred in concluding that uncertainty about whether the Corps would operate the projects in a way that would result in

additional releases above 5000 cfs during drought operations precluded a finding of redressability. Florida contends that the Corps is likely to exercise its authority within existing operational protocols to provide Florida with additional flows produced by a cap on Georgia's consumption. But the Corps' release of more than the minimum flows required from Woodruff Dam under various conditions has historically been based primarily on serving authorized project purposes, to comply with the maximum fall rate, or to release water in an emergency, not by basin inflow, and the Corps would not expect releases above the 5000 cfs minimum flow requirement to increase along with basin inflow during drought operations.

Florida further contends that the Corps has indicated that it would alter its operational protocols to provide Florida with additional flows in response to an equitable apportionment decree issued by this Court. The Corps, however, would not be formally bound by the Court's decree, which would impose a cap on Georgia's consumption without directing a change in the Corps' operations. The Corps' decision about how to proceed thus would arise in an unusual posture and raise several questions that the Corps has not yet formally considered. For example, the only specific harm identified by the Master is to Florida's oyster fishery in Apalachicola Bay. Whether the Corps could make routine releases from federal projects that are specifically designed to remedy harm to the oyster fishery is a difficult question that would turn on a careful assessment of the congressional authorizations for the ACF system and statutory limitations on the Corps' flexibility, in light of the Court's decree and basin conditions. To address those issues through possible revisions in the Master Manual

and manuals for individual projects, the Corps would be required to invoke public processes and environmental reviews governing its establishment and amendment of operating procedures governing its projects.

ARGUMENT

THE CORPS WOULD NOT EXPECT RELEASES IN EXCESS OF THE MINIMUM FLOW AT WOODRUFF DAM TO INCREASE ALONG WITH INCREASED FLOW ON THE FLINT RIVER DURING DROUGHT OPERATIONS AND CONSIDERATION OF ANY CHANGES TO THE MASTER MANUAL TO PROVIDE ADDITIONAL RELEASES WOULD REQUIRE FURTHER ADMINISTRATIVE PROCESSES

A. The Master focused squarely on the Corps' operational protocols in the ACF Basin and concluded that Florida failed to prove by clear and convincing evidence that a cap on Georgia's consumption would provide Florida with a material benefit during drought periods because those protocols call for the Corps to store additional basin inflow during drought operations. Rep. 47-62. The Master described both the Corps' operational protocols in effect at the time of trial and the revised protocols under the then-proposed Master Manual. Rep. 35-46. Florida does not take exception to any part of that description, including the Master's conclusion that the Corps' operational protocols in effect at the time of trial and under the new Master Manual allow the Corps to store up to 100% of basin inflow over 5000 cfs during drought operations. Rep. 39-41, 44-45. Similarly, Florida does not take exception to the Master's finding that during drought operations, it would be physically possible for the Corps to increase storage in its reservoirs on the Chattahoochee River to do so—such that any increased flows on the Flint River result-

ing from a cap on Georgia's consumption would be offset, and that a cap on Georgia's consumption would not necessarily result in increased flows in the Apalachicola River during drought operations. Rep. 49-53.

The Corps does have the ability to make additional releases during drought operations, as reflected in the Master Manual in two ways. First, the 5000 cfs flow from Woodruff Dam during drought operations is a *minimum* flow designed to ensure compliance with the ESA. Rep. 41-42; *Final EIS* 6-45. Second, the Master Manual provides that during drought operations, the Corps may store *up to* 100% of basin inflow above 5000 cfs. Rep. 44-45; *Final EIS* 2-76. But Florida does not take exception to the Master's determination that during drought operations, any release that would result in flows above the minimum of 5000 cfs from Woodruff Dam are within the Corps' discretion to serve other project purposes, such as flood risk management or to maintain the fall rate. Rep. 53-54.

In the view of the United States, each of the Master's unchallenged determinations is sound and grounded in the record.

B. Florida does take exception (Exceptions Br. 40-46), however, to the Master's determination that even if basin inflow increased due to a cap on Georgia's consumption on the Flint River, it is uncertain how the Corps would choose whether or not to make additional releases above 5000 cfs during drought operations. See Rep. 53-62. The Master concluded that "[w]hile the evidence presented at trial shows that the Corps retains discretion in its operations, how the Corps will exercise that discretion remains unknown." Rep. 53. Because of the inherent uncertainty in whether the Corps' would exercise its authority in a manner that would result in

flow rates from Woodruff Dam in excess of the minimum under the governing protocols, the Master concluded that "it appears likely that ensuring relief for Florida during [drought operations] would require modification of the rules governing the Corps' reservoir operations." Rep. 61-62. Thus, there are two issues related to Florida's exception—the Corps' ability to release additional water under the current Master Manual and individual reservoir regulation manuals, and the possibility that the Corps would change those manuals in response to a decision of this Court.

1. Florida contends (Exceptions Br. 40-41) that "the evidence at trial and the Corps' statements after trial overwhelmingly establish that the Corps is likely to facilitate, rather than frustrate, a decree entered by this Court." Florida contends (*ibid.*) that the evidence established that the Corps has released more than 5000 cfs in the past, and thus the Corps is likely to do so in the future. The Master found that "Florida is likely correct that the Corps has historically exercised its discretion to release more than the required minimum" during drought operations, Rep. 55, but concluded that the Corps might choose not to do so in the future, Rep. 55-56. The Master explained that the Corps' policies seek to "balance various project purposes while replenishing storage," and he noted that during a 2012 drought, "Flint River flow varied by up to 2,000 cfs without corresponding spikes in releases by the Corps from Jim Woodruff Dam," demonstrating that the Corps had released less water from its storage reservoirs on the Chattahoochee River as Flint River flows increased. Rep. 59.

In the Corps' view, as reflected in both the RIOP and the current Master Manual, the Corps' release of more

than the minimum flows required from Woodruff Dam at various times has historically been driven primarily by the need to serve authorized project purposes and to comply with the maximum fall rate, to release water in an emergency (such as a chemical spill or a grounded barge), or to maintain the structural integrity of the projects. See *Final EIS* 2-60 to 2-61, 2-75, 5-56; U.S. Army Corps of Eng'rs, *Master Water Control Manual, Apalachicola-Chattahoochee-Flint (ACF) River Basin, Alabama, Florida, Georgia* ch. 7, at 7-1, 7-16, App. A, at E-D-22 (rev. Mar. 2017) (*Master Manual*). During drought operations, the need to comply with the ESA while avoiding catastrophic depletion of storage and refilling the reservoirs as rapidly as possible are overriding considerations. *Master Manual* 7-10 to 7-12, 7-21, 8-4 to 8-5. Increased basin inflow is thus stored during drought operations as a matter of course, with deviations from the protocols described in the manuals in the form of releases that are made as needed to serve congressionally authorized project purposes or in emergency circumstances. *Id.* at 7-21 to 7-24. More generally, as the Master Manual explains, the "[a]uthorized purposes for operation of the Federal ACF System of projects include flood risk management, hydropower, navigation, fish and wildlife conservation, recreation, water supply, and water quality, pursuant to the specific ACF project authorizing legislation and other, more generally applicable statutory authorities (e.g., the Flood Control Act of 1944, P.L. 89-72, and P.L. 85-624)." *Id.* at 7-2. Each of "the legally authorized project purposes is considered when making water control regulation decisions, and the decisions affect how water is stored and released from the projects." *Ibid.*

In short, while basin inflow is a relevant consideration, it has historically not been the primary factor in the Corps' decisionmaking process for making additional releases above 5000 cfs from Woodruff Dam during drought operations. Accordingly, under both the RIOP and the current operating protocols, the Corps would not generally expect those releases during drought operations to increase in parallel with increased flows produced by a cap on Georgia's consumption. Thus, as the United States explained to the Master, in drought operations, "Apalachicola River flows would be very similar with or without a consumption cap until enough water is stored to return the system to normal operations." Docket entry No. 631, at 17-18.

The United States does not mean to suggest that a consumption cap would provide no benefit to the Corps' operations in the ACF Basin or to Florida. As explained to the Master, increased basin inflows would generally benefit the ACF system by delaying the onset of drought operations, by allowing the Corps to meet the 5000 cfs minimum flow longer during extended drought, and by quickening the resumption of normal operations after drought. Docket entry No. 631, at 17-19. The United States takes no position on whether Florida proved that those benefits are of sufficient quantity to justify relief in this case. And of course, if, as Florida has argued and as the United States has agreed in principle, a decree capping Georgia's consumption could result in more water flowing to Florida in some circumstances under existing Corps protocols, then the Corps would likely not need to change its operations in response to such a decree. *Id.* at 3 n.1, 18-19.

If, however, additional releases by the Corps would be necessary in some circumstances to further Florida's

interests, it is impossible to define the limits of the Corps' ability to make those releases consistent with the congressionally authorized purposes without knowing the precise contours of the decree and the implications for other project purposes and storage regimens. And even if releases from storage that do not adversely impact the congressionally authorized purposes could be made as a practical matter to satisfy the result sought to be accomplished by a consumption cap, there would remain a significant and difficult question as to whether the *existing* Master Manual would permit the Corps to formally and routinely release water from storage to serve a purpose that is not specifically provided for in the Master Manual, not specifically authorized by Congress or mandated by general statute, or required by a court order directed to the Corps. The Corps would need to explore those questions through appropriate administrative processes before formally committing to operate the projects in any particular way as a matter of course.

2. Similar considerations are also relevant to Florida's contention (Exceptions Br. 42-46) that the Corps might revise its Master Manual and individual reservoir regulation manuals in response to a decision by this Court. The Master did not assess that possibility, but did note that a mandated modification of the rules governing the Corps' operations would require active participation by the Corps in the case. Rep. 61-62.

Florida relies heavily on a statement by the Corps in the record of decision adopting the current Master Manual that reiterated the Corps' longstanding position that it will take into account a resolution of the dispute among Florida, Georgia, and Alabama over the ACF Basin. That statement reads as follows:

> With respect to the *Florida v. Georgia* case, [the Corps] will review any final decision from the U.S. Supreme Court and consider any operational adjustments that are appropriate in light of that decision, including modifications to the then-existing [Master Manual], if applicable. However, [the Corps] is not a party to the case, and [Corps] operations are not at issue in the litigation. Rather, the case involves the State of Florida's request for an equitable apportionment of the waters of the ACF Basin, specifically through a cap on consumption of water by the State of Georgia. *Florida v. Georgia*, No. 142 Orig., Report of the Special Master 18 (February 14, 2017). The United States has participated in the case as *amicus curiae*, but has taken no position as to whether the State of Florida's requested relief should or will be granted. Should the Supreme Court issue a decree apportioning the waters of the ACF Basin, should the States reach agreement endorsed by Congress on an allocation of basin waters, or should Congress enact other legislation affecting the purposes or operation of the federal ACF system, [the Corps] would take those developments into account and adjust its operations accordingly, including new or revised [Master Manuals], new or supplemental [42 U.S.C. 4332 (National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. 4321 *et seq.*)] or ESA documentation, or any other actions as may be appropriate under applicable law.

Record of Decision 18. The Corps stands by that statement and would consider formalizing the exercise of its operational latitude in light of a decree of this Court to the extent its authorities allow. But consideration of adjusting operations through a new or revised Master

Manual and individual reservoir regulation manuals would require participation by other Basin interests and a process of public notice and involvement. See, *e.g.*, Eng'r Reg. 1110-2-240, at 1-2 (May 30, 2016) ("[W]ater control plans for projects owned and operated by [the Corps] shall be developed in concert with all basin interests which may be impacted by or influence project regulation, and public involvement in the development or significant revision of water control plans shall be provided for as required under this regulation.")[7]; *id.* at 5-2 ("Public involvement in the development or significant revision of water control plans, as well as certain deviations from those water control plans, is required under this regulation."); see also 42 U.S.C. 4332 (NEPA). That process, in turn, would require, at a minimum, an examination of the congressionally authorized purposes, a determination of how providing additional flows would impact those purposes, limitations imposed by the ESA or other laws, and supplemental documentation of environmental impacts as required by NEPA. The Corps cannot prejudge those required processes.

For example, the only specific harm to Florida identified by the Master in the Report is harm to the oyster fishery in Apalachicola Bay. Rep. 31-32. The Corps does not currently make specific releases for the oyster fishery. If the Court's decision contemplated that the oyster fishery needs more water, then to accomplish that result the Corps would have to consider whether under its existing authorities it could incorporate the furnishing of water specifically for that fishery into a

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[7] Available at http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-2-240.pdf?ver=2016-05-19-103739-330.

revised Master Manual as an additional purpose of its projects in the ACF Basin—or at least whether it could release additional water to do so consistent with existing authorities and without harming other purposes.

Of course, a decision by this Court apportioning the waters of the ACF Basin, whether in the form of a consumption cap or something else, would necessarily form part of the constellation of laws to be considered by the Corps when deciding how best to operate the federal projects in the ACF Basin for their congressionally authorized purposes. But unlike a compact among the States that is approved by Congress or legislation altering the purposes of the ACF system, an apportionment by this Court in the form of a consumption cap would not formally bind the Corps to take any particular action because the United States is not a party to this suit, which has proceeded on the understanding that any relief must be shaped without mandating a change in the Corps' operations. Indeed, the United States did not intervene in this action in large part to avoid being bound by a decree that could directly affect Corps operations before the Corps had a chance to finally complete its process of updating the Master Manual and individual reservoir regulation manuals for the ACF Basin based on its consideration of the congressionally authorized purposes of the projects and Basin conditions. See U.S. Amicus Br. 17-23.

Similarly, Florida requested an apportionment taking the form of a consumption cap precisely to avoid requiring any change in the Corps' operations so that the case would not be dismissed for failure to join the United States. Docket entry No. 128, at 12-13. At the motion-to-dismiss stage, the United States opined that

the case could proceed so long as relief would not require the Corps to alter its operations. Docket entry No. 66, at 10-18. As the United States has explained, it is likely that additional flows resulting from a cap on Georgia's consumption would reach Florida without any changes in the Corps' operational protocols, and is more a question of timing than whether the flows would reach Florida at all. *Id.* at 18-19; Docket entry No. 631, at 18-19. The United States has suggested that it is possible that the Court could fashion relief given the beneficial effect additional water would have on the ACF system as a whole. *Ibid.* It thus may remain possible to design a consumption cap that would provide Florida with additional water at some points without any alteration of the Corps' operations, as Florida contends (Exceptions Br. 46). But if truly effective relief for the oyster fishery cannot be accomplished without the Corps changing its operations, then such a determination by this Court would likely require that the Corps engage in the required public processes and environmental reviews (see pp. 30-31, *supra*) for revising the Master Manual, and adjust its operations to the extent permissible under law and consistent with the Corps' mission of operating the ACF system for its congressionally authorized purposes.

CONCLUSION

The Court should enter an order consistent with the position expressed in this brief.

Respectfully submitted.

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APPENDIX

Table 2.1-5.
May 2012 RIOP for Jim Woodruff Lock and Dam, Apalachicola River Minimum Discharge from Woodruff Lock and Dam by Month and by Basin Inflow Rates

Months	Composite Conservation Storage Zone	Basin Inflow (cfs)	Releases from Jim Woodruff Lock and Dam (cfs)	Basin Inflow Available for Storage[a]
Mar–May	Zones 1 and 2	≥ 34,000	≥ 25,000	Up to 100% BI>25,000
		≥ 16,000 and < 34,000	≥ 16,000+50% BI > 16,000	Up to 50% BI>16,000
		≥ 5,000 and < 16,000	≥ BI	
		< 5,000	≥ 5,000	
	Zone 3	≥ 39,000	≥ 25,000	Up to 100% BI>25,000
		≥ 11,000 and < 39,000	≥ 11,000+50% BI > 11,000	Up to 50% BI>11,000
		≥ 5,000 and < 11,000	≥ BI	
		< 5,000	≥ 5,000	
Jun–Nov	Zones 1, 2, and 3	≥ 22,000	≥ 16,000	Up to 100% BI>16,000
		≥ 10,000 and < 22,000	≥ 10,000+50% BI > 10,000	Up to 50% BI>10,000
		≥ 5,000 and < 10,000	≥ BI	
		< 5,000	≥ 5,000	
Dec–Feb	Zones 1, 2, and 3	≥ 5,000	≥ 5,000 (Store all BI> 5,000)	Up to 100% BI > 5,000
		< 5,000	≥ 5,000	
At all times	Zone 4	NA	≥ 5,000	Up to 100% BI > 5,000
At all times	Drought Zone	NA	≥ 4,500[b]	Up to 100% BI > 4,500

Sources: USACE, Mobile District 2012; USFWS 2012

Notes:

[a] Consistent with safety requirements, flood risk management purposes, and equipment capabilities.

[b] Once composite conservation storage falls below top of Drought Zone, ramp-down to 4,500 cfs will occur at a rate of 0.25 ft/day.

Table 5.4-3.
Jim Woodruff Lock and Dam, Apalachicola River Minimum Discharge for Federally Listed Species by Month and by Basin Inflow Rates

Months	Composite Conservation Storage Zone	Basin Inflow (cfs)	Min. Releases from Jim Woodruff Lock and Dam (cfs)	Basin Inflow Available for Storage[a]
March–May	Zones 1 and 2	≥ 34,000	= 25,000	Up to 100% BI>25,000
		≥ 16,000 and < 34,000	= 16,000+50% BI > 16,000	Up to 50% BI>16,000
		≥ 5,000 and < 16,000	= BI	
		< 5,000	= 5,000	
	Zone 3	≥ 39,000	= 25,000	Up to 100% BI>25,000
		≥ 11,000 and < 39,000	= 11,000+50% BI > 11,000	Up to 50% BI>11,000
		≥ 5,000 and < 11,000	= BI	
		< 5,000	= 5,000	
June–November	Zones 1, 2, and 3	≥ 22,000	= 16,000	Up to 100% BI>16,000
		≥ 10,000 and < 22,000	= 10,000+50% BI > 10,000	Up to 50% BI>10,000
		≥ 5,000 and < 10,000	= BI	
		< 5,000	= 5,000	
December–February	Zones 1, 2, and 3	≥ 5,000	= 5,000	Up to 100% BI > 5,000
		< 5,000	= 5,000	
If Drought Triggered	Zone 3	NA	= 5,000	Up to 100% BI > 5,000
At all times	Zone 4	NA	= 5,000	Up to 100% BI > 5,000
At all times	Drought Zone	NA	= 4,500[b]	Up to 100% BI > 4,500

Notes:

[a] Consistent with safety requirements, flood risk management purposes, and equipment capabilities.

[b] Once composite conservation storage falls below the top of the Drought Zone, ramp down to a minimum release of 4,500 cfs at rate of 0.25 ft/day based on the USGS gage at Chattahoochee, Florida (02358000).

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AND
BRIEFS

Supreme Court, U.S.
FILED
JAN 8 - 2015
OFFICE OF THE CLERK

No. 142, Original

In The
Supreme Court of the United States

STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

STATE OF GEORGIA'S ANSWER

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January 8, 2015

ANSWER TO COMPLAINT FOR EQUITABLE APPORTIONMENT AND INJUNCTIVE RELIEF

The State of Georgia ("Georgia" or "Defendant"), for its Answer to the Complaint For Equitable Apportionment and Injunctive Relief ("Complaint") filed by the State of Florida ("Florida"), states:

1. This is an action by the State of Florida to equitably apportion the interstate waters of the Apalachicola-Chattahoochee-Flint River Basin ("ACF Basin").

Defendant admits this is an equitable apportionment action. Defendant denies that Florida is entitled to equitable apportionment of the ACF Basin.

FACTUAL BACKGROUND

2. The Chattahoochee River arises in northern Georgia and flows 430 miles to its confluence with the Flint River at the Georgia-Florida state line. The southern half of the Chattahoochee River forms the border between Georgia and Alabama. The Flint River also arises in the State of Georgia, before converging with the Chattahoochee River to form Florida's Apalachicola River (the "River"). The River flows into the Gulf of Mexico at the Apalachicola Bay (the "Bay"). Collectively, these three rivers and their surrounds comprise the ACF Basin. A map of the ACF Basin is provided at App. 1.

Defendant admits the allegations in paragraph 2, except that it denies that the Flint River converges with the Chattahoochee

River to form the Apalachicola River. Defendant further states that the Chattahoochee River and Flint River flow into Lake Seminole and that the U.S. Army Corp of Engineers (the "Corps") releases water from the Woodruff Dam into the Apalachicola River. Defendant further notes that while a portion of the Chattahoochee River forms the border between Georgia and Alabama, the river itself is in Georgia. Defendant admits that Plaintiff attached a map at App. 1 but lacks information sufficient to form a belief about the truth of the contents of the map. Except as specifically admitted herein, Defendant denies the allegations in paragraph 2.

3. The waters of the Chattahoochee and Flint River Basins provide essential inflows to the Apalachicola River and Bay (collectively, the "Apalachicola Region" or the "Region"). The flow of the Apalachicola River at the Georgia-Florida border, and the resulting inflows to the River and Bay, are created by the combined inflows of the Chattahoochee and Flint Rivers, their tributaries and hydrologically connected groundwater. These waters have nourished a rare and exemplary ecosystem that state, national, and international bodies have recognized for the diversity of its plant and animal species.

Defendant denies the first two sentences in paragraph 3, and states that the Chattahoochee and Flint Rivers flow into Lake Seminole. Defendant further states that the Corps releases water from the Woodruff Dam into the Apalachicola River. Defendant lacks

information sufficient to form a belief about the truth of the remaining allegations in paragraph 3 and therefore denies them.

4. The Apalachicola Region is also a unique and vibrant cultural, social and economic community, dependent primarily on the environmental health of the River and Bay. The ecosystem fuels a resource based economy that depends on the harvest of commercially salable species, most notably the Eastern Oyster. Generations of inhabitants have been defined by their existence in this economy and have lived, worked and prospered in a culturally rich community.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 4 and therefore denies them.

5. At present, the Apalachicola Region's ecosystem and economy are suffering serious harm because of Georgia's increasing storage and consumption of water from both the Chattahoochee and Flint River Basins. Large, and ever-increasing, amounts of water (taken both as surface water and the hydrologically connected groundwater) are withdrawn, impounded and consumed upstream for municipal, industrial, recreational, and agricultural uses permitted by Georgia. These uses are forcing Floridians to shoulder the heavy burden of Georgia's growth.

Defendant admits that Georgians draw water from the Chattahoochee and Flint River Basins for municipal, industrial, and agricultural uses, among others. Defendant

denies the remaining allegations in paragraph 5.

6. Florida fisheries have suffered declines as a result of Georgia's upstream storage and consumption of water from the Chattahoochee and Flint River Basins. Flow depletions from the Georgia portion of the ACF Basin have already shrunk available riverine and estuarine habitats in the Apalachicola Region and precipitated a collapse of Florida's oyster fishery. The federal government recently recognized the collapse and issued a fishery disaster declaration for the oyster industry in Florida.

Defendant denies the allegations in paragraph 6, except that it admits, on information and belief, that Florida Governor Rick Scott sought a declaration of a commercial fisheries failure for the oyster industry from the U.S. Department of Commerce, which was granted. Except as specifically admitted herein, Defendant denies the allegations in paragraph 6.

7. Georgia officials have projected that Georgia's consumption of ACF Basin water will nearly double from present levels by 2040. See Affidavit of Judson H. Turner, Director of the Georgia Environmental Protection Division, provided at App. 3-27. If Georgia's consumption increases as planned, the sole source of fresh water sustaining the Apalachicola River and Bay will shrink further, jeopardizing the viability of the Apalachicola Region's ecology, economy, and way of life.

Defendant denies the allegations in paragraph 7.

8. Before reaching Florida, the waters of the Chattahoochee River are temporarily stored in reservoirs owned and operated by the U.S. Army Corps of Engineers (the "Corps"). From 1990 through 2012, the Corps' operation of these reservoirs, and in particular operation of Buford Dam, which creates Lake Sidney Lanier in Georgia, was the focus of intense, multi-state and multi-jurisdictional litigation culminating in two decisions of the Circuit Courts of Appeals. *Se Fed. Power Customers, Inc. v. Geren*, 514 F.3d 1316 (D.C. Cir. 2008); *In re MDL-1824 Tri-State Water Rights Litig.*, 644 F.3d 1160 (11th Cir. 2011). That litigation, directed solely at federal agencies, focused on the Corps' obligations under various federal statutes, including the Endangered Species Act ("ESA"), the Flood Control Act of 1944, the National Environmental Policy Act, the Rivers and Harbors Act of 1899, and the Water Supply Act of 1958. The lower court litigation did not, and could not, address the fundamental problem facing Florida - Georgia's ever-increasing storage and use of water that has historically nourished the Apalachicola Region.

Defendant admits that the waters of the Chattahoochee River flow through, and that some of the waters are temporarily stored in, reservoirs owned and operated by the Corps. Defendant admits that the Corps' operation of these reservoirs was the subject of multi-state and multi-district litigation directed at federal agencies between 1990 and 2012, which involved multiple federal statutes. Except as

specifically admitted herein, the allegations in paragraph 8 are denied.

9. A significant, yet ultimately unsuccessful, effort was made to resolve that problem. Beginning in the late 1990s, and into the early 2000s, Florida attempted to resolve its concerns through negotiation. In early 1992, Florida, Georgia, and Alabama (collectively, the "States") commenced a process to study the needs of the ACF Basin ("Comprehensive Study"). The Comprehensive Study arose from the States' efforts to settle litigation the State of Alabama initiated against the Corps. The States memorialized their intent in a Memorandum of Agreement dated January 3, 1992, which was approved by the U.S. District Court for the Northern District of Alabama.

Defendant admits that a Comprehensive Study was commenced in 1992. Defendant further admits that Florida, Georgia, and Alabama entered into a Memorandum of Agreement dated January 3, 1992. Except as specifically admitted herein, the allegations and characterizations in paragraph 9 are denied.

10. In 1997, following the completion of the Comprehensive Study, Congress passed the Apalachicola-Chattahoochee-Flint River Basin Compact, Pub. L. No. 105-104, 111 Stat. 2219 (1997) ("ACF Compact"), which was subsequently ratified by all three States. The parties to the ACF Compact agreed to develop an allocation formula for equitably apportioning the waters of the ACF Basin among the States while "protecting the water quality, ecology, and biodiversity" of the Apalachicola Region. ACF

Compact Art. VII(a). The ACF Compact recognized that, although upstream uses could continue to develop during the pendency of those negotiations, those uses would not become "permanent, vested or perpetual rights to the amounts of water used between January 3, 1992 and the date on which the [ACF Compact] Commission adopts an allocation formula." ACF Compact Art. VII(c). While the States could have resolved their differences through this ACF Compact process, Georgia's bad faith caused the negotiations to disintegrate, resulting in the demise of the ACF Compact in 2003.

Defendant denies the allegation that it acted in bad faith. Defendant further states that to the extent the allegations in paragraph 10 purport to characterize the ACF Compact, the document speaks for itself and no response is required. To the extent any response is required, defendant admits that Congress passed the Apalachicola-Chattahoochee-Flint River Basin Compact, Pub. L. No. 105104, 111 Stat. 2219 (1997) ("ACF Compact"), and that Florida, Georgia, and Alabama ratified the ACF Compact. Defendant denies all other allegations in paragraph 10.

11. Georgia took advantage of the time between initiation of the Comprehensive Study in 1992 and failure of the ACF Compact in 2003 to continually increase its consumptive uses. Since 1992, Georgia's municipal, industrial, recreational, and agricultural uses of ACF Basin water have grown significantly, but under the terms of the Memorandum of Agreement and the ACF Compact, Georgia had no entitlement to any of these inflated

uses. The pattern did not end after the ACF Compact failed, but has continued unabated, despite another decade of lower court litigation and failed judicial and non-judicial settlement efforts. Indeed, Florida has made numerous attempts to resolve this interstate dispute through formal and informal discussions, as well as court-sponsored mediation (including sessions facilitated by the U.S. Secretary of the Interior and the Council on Environmental Quality). *See, e.g.*, Joint Motion for Order Regarding Confidentiality of Settlement Negotiations, *In re Tri-State Water Rights Litig.*, (No. 315). All of these efforts ultimately failed.

Defendant admits that Florida and Georgia have attempted previously to resolve this dispute through formal and informal discussions, including through mediation, but denies all other allegations in paragraph 11.

12. Florida has exhausted all other reasonable means to arrest Georgia's unchecked use of water and halt the continuing degradation of the Apalachicola Region. Florida now, of necessity, invokes the Court's original jurisdiction seeking an appropriate apportionment to redress existing harm and to avert additional harmful depletions caused by uses in Georgia. There is no other forum in which Florida may vindicate its interests and obtain the requisite relief against Georgia.

Defendant admits that Florida has invoked th Court's original jurisdiction. Defendant denies all other allegations in paragraph 12.

13. Florida's action for an equitable apportionment includes all waters hydrologically connected to the Chattahoochee and Flint Rivers (including, without limitation, groundwater, rivers, streams, creeks, draws, and drainages).

To the extent the allegations in paragraph 13 purport to characterize the Complaint, the document speaks for itself and no response is required. To the extent a response is required, the allegations in paragraph 13 are denied.

14. Alabama lies upstream of Florida within the ACF Basin. Although not opposed to Alabama's participation in this action, Florida asserts no wrongful act by Alabama and seeks no affirmative relief against Alabama. Therefore, Alabama is not named in this action. *Compare Nebraska v. Wyoming*, 295 U.S. 40 (1935).

Defendant admits that a portion of the geography of the State of Alabama lies upstream of Florida within the ACF Basin, and further states that Alabama withdraws and consumes water from the ACF Basin for municipal, agricultural, recreational, and industrial purposes. Defendant further admits that Florida did not name Alabama in its Complaint. Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 14 and therefore denies them.

15. Florida also seeks no affirmative relief against the United States in this action with respect

to the Corps' operation of the federally authorized dam and reservoir system, or any other interest.

Defendant admits that Florida did not name the United States in its Complaint. Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 15 and therefore denies them.

JURISDICTION

16. The Court has jurisdiction pursuant to Article III, Section 2, Clause 2 of the United States Constitution and 28 U.S.C. § 1251(a) (2011).

Defendant admits that Plaintiff seeks to invoke the original jurisdiction of this Court but denies that this matter is appropriate for resolution as an original action.

EQUITABLE APPORTIONMENT

The Apalachicola-Chattahoochee-Flint River Basin

17. The Chattahoochee River begins in the Blue Ridge Mountains in northeastern Georgia and flows through metropolitan Atlanta and to the southwest until it turns south and forms the border of Georgia and Alabama. The Chattahoochee River and its tributaries provide municipal and industrial water to a majority of the Atlanta metropolitan population including Fulton, DeKalb, Gwinnett, Forsyth, Douglas and Cobb counties, as well as the city of Columbus. Most surface water intakes are located on the Chattahoochee River, its smaller tributaries, and Lake Lanier.

Defendant admits the Chattahoochee River begins in the Blue Ridge Mountains in northeastern Georgia, flows through metropolitan Atlanta, and forms a portion of the border between Georgia and Alabama. Defendant further states that no part of the Chattahoochee River lies in Alabama. Defendant further admits the Chattahoochee River and its tributaries provide municipal and industrial water to Atlanta's metropolitan population and to the city of Columbus. Defendant admits that surface water intakes are located on the Chattahoochee River, its tributaries, and on Lake Lanier. Except as specifically admitted herein, the allegations in paragraph 17 are denied.

18. The Flint River rises in the metropolitan Atlanta area and flows generally southward through Albany and on to the Georgia-Florida border. The Flint River Basin is the source of water for hundreds of thousands of acres of irrigated land in southern Georgia, most of which is served by irrigation wells.

Defendant admits that the Flint River rises in the metropolitan Atlanta area and flows generally southward through Albany and toward the Georgia-Florida border. Defendant further states that the Flint River flows into Lake Seminole and that the Corps releases water from the Woodruff Dam into the Apalachicola River. Defendant further admits that water in the Flint River Basin is used to irrigate land in southern Georgia, including through irrigation wells. Except as specifically

admitted herein, the allegations in paragraph 18 are denied.

19. The southern half of the Flint River and some of its tributaries are hydrologically connected to the underlying Floridan Aquifer. In this region, groundwater discharge through the streambed, stream banks, and springs from the Floridan Aquifer contribute to the total flows of the river during years of normal precipitation. That percentage increases in years with below-normal precipitation.

Defendant admits that some of the Flint River and some of its tributaries are hydrologically connected to the Floridan Aquifer. Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 19 and therefore denies them.

20. At the Georgia-Florida border, the Flint River joins with the Chattahoochee River at the Jim Woodruff Lock and Dam ("Woodruff Dam") to form Lake Seminole. At Lake Seminole, the unified Chattahoochee and Flint Rivers become the Apalachicola River. The Apalachicola River lies entirely within the State of Florida and flows, unimpeded by any dam, southward across Florida's panhandle and feeds into the Apalachicola Bay at the Gulf of Mexico.

Defendant admits the allegations in the first and third sentences of paragraph 20. Defendant denies the second sentence of paragraph 20 and states that the Corps releases water from the Woodruff Dam into the Apalachicola River. Except as specifically

admitted herein, the allegations in paragraph 20 are denied.

21. Water withdrawals from the Chattahoochee and Flint River Basins, either directly from the Chattahoochee and Flint Rivers and their tributaries or indirectly from hydrologically connected ground-water, reduce the amount of water flowing to the Apalachicola River at all times, but the effects are especially apparent during the low flow summer and fall periods. Therefore, water use in Georgia has a direct hydrologic impact on Florida.

Defendant denies the allegations in paragraph 21.

22. The Corps operates five dams on the Chattahoochee River (in downstream order): Buford, West Point, Walter F. George, George W. Andrews and Woodruff. Woodruff also impounds water from the Flint River and marks the upstream end of the Apalachicola River. Although independent facilities, the Corps' dams are operated as a unified whole to achieve multiple project purposes.

Defendant admits the first two sentences in paragraph 22. Defendant lacks information sufficient to form a belief about the truth of the allegations in the third sentence of paragraph 22 and therefore denies them.

23. Water storage and consumption in Georgia also affects how water is released to Florida from these federal reservoirs. The Corps determines how much water to release from its reservoirs based, in part, upon calculated inflows to the ACF Basin. Georgia's storage and consumption reduces those inflows. As a result, as Georgia's uses increase, the

calculated inflows to the ACF Basin decline, and even less water is released from the Corps' reservoirs. The net result of Georgia's unmitigated water use is that less water reaches Florida due to both the hydrologic depletions and the Corps' operational protocols.

Defendant admits that the Corps determines how much water to release from its reservoirs. Defendant further admits that the Corps' operational protocols affect water flow. Except as specifically admitted herein, the allegations in paragraph 23 are denied.

The Unique and Rich Ecology of the Apalachicola Region

24. Maintaining an ample flow of water from the Chattahoochee and Flint River Basins is critical to preserving the ecology of the Apalachicola Region. Georgia's current storage and consumption has already injured this precious resource.

Defendant denies the allegations in paragraph 24.

25. The rich biodiversity of the Apalachicola Region in Florida is reflected in the presence of 142 freshwater and estuarine fish species (99 species in nontidal reaches and 43 species in tidal reaches of the River), 26 species of mussels (including 3 federally listed mussels and 4 candidate species proposed for federal listing), and over 1,600 species of plants (including 342 species in wetland forests of the River floodplain).

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 25 and therefore denies them.

26. The Apalachicola River has the largest river floodplain forest in Florida and the greatest number of freshwater fish species in Florida. The Apalachicola Basin has the greatest herpetofaunal species richness in North America north of Mexico and is one of the most important areas in the United States for reptiles and amphibians (particularly anurans, salamanders, snakes, and turtles). Also, Ogeechee tupelo trees in the floodplain forest of the Apalachicola River are the principal source of commercially produced tupelo honey in the United States.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 26 and therefore denies them.

27. The Apalachicola Bay has been historically one of the most productive estuarine systems on the Gulf Coast. It is home to the congressionally created Apalachicola National Estuarine Research Reserve ("ANERR"), which encompasses 246,766 acres of land and water, making it the second largest of the 28 national estuarine research reserves. ANERR includes two barrier islands and part of a third, which includes the lower 20 miles of the Apalachicola River and its floodplain, adjoining uplands, and the Apalachicola Bay. ANERR received international recognition when it was designated as a Biosphere Reserve by the United Nations Educational, Scientific, and Cultural Organization.

Defendant admits, on information and belief, that Congress created the Apalachicola National Estuarine Research Reserve ("ANERR"). Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 27, and therefore denies them.

28. The rich and complex ecosystem of the Apalachicola Region developed under the Chattahoochee and Flint Rivers' unimpaired, natural flow regime. This natural flow regime was responsible for the creation of river channel habitat, cyclical inundations of the floodplain, inter-connections of floodplain channels, maintenance of a suitable salinity regime in the Bay, and inputs of essential nutrients to the Bay.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 28 and therefore denies them.

29. The Apalachicola Region provides habitat for more than 100 species that the federal government and the State of Florida have designated as endangered, threatened, or species of concern. These species, and their federally protected habitats, depend upon the historical flow patterns of the Apalachicola River for their continued existence. Threatened and endangered species also reside in the waters within the Georgia portion of the ACF Basin.

Defendant admits the last sentence in paragraph 29, and further admits that the federal government has designated protected species in the Georgia and Florida portions of

the ACF Basin. Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 29 and therefore denies them.

The Social and Economic Significance of the Apalachicola River and Bay

30. The environmental health of the Apalachicola Region directly affects the local economy and sociology. The local population of Franklin County and the surrounding region is highly dependent on the region's natural resources, which support both the regional economy and a unique way of life that has evolved around the seafood and coastal industries.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 30 and therefore denies them.

31. Freshwater inflows provide essential nutrients to the Bay that make it one of the most productive areas for fish and shellfish in the entire Gulf of Mexico. Freshwater inflows also reduce the Bay's salinity, which is essential to oysters and other commercially salable species, by limiting predation by marine species and disease.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 31 and therefore denies them.

32. Commercially salable species in the Bay include the Eastern Oyster, shrimp, blue crab, and several varieties of finfish. Until recently, the Bay produced about 12 percent of the nation's Eastern Oysters. Much of the oyster, shrimp and fish harvest

is exported for consumption throughout the United States.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 32 and therefore denies them.

33. The species that inhabit the Apalachicola Region provide a wide range of economic benefits to the Region and to Florida. Similarly, the Apalachicola Region supports significant tourism and recreation-based industries. Tourists and outdoor enthusiasts engage in recreation in, on, and around the River and Bay. Outdoor recreation in the Apalachicola Region includes a wide spectrum of activities, including kayaking, canoeing, mountain biking, horseback riding, hunting, fishing, ATV, and motorbike riding, backpacking, birding, and botanical study.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 33 and therefore denies them.

34. The resources within the Apalachicola Region also provide substantial economic benefits in the form of ecosystem services, *e.g.*, water filtration, waste assimilation, flood attenuation, and flood mitigation. All of these benefits accrue as a direct result of the ecosystem that is created from the flows of the Apalachicola River.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 34 and therefore denies them.

35. The region's economic and sociological interests cannot be replaced with other industries or mitigated through relocation. Indeed, if the seafood

industry disappears in Apalachicola, one of the most storied working waterfronts in the State will be lost to history.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 35 and therefore denies them.

Efforts to Protect the Apalachicola River and Bay

36. Because of its value and importance to its citizenry, Florida has made a substantial commitment of public resources to protect the Apalachicola Region. The altered flow regime caused by Georgia has had, and continues to have, an adverse impact on Florida's preservation efforts, undermining Florida's extraordinary investments.

Defendant lacks information sufficient to form a belief about the truth of the allegations contained in the first sentence in paragraph 36 and therefore denies them. Defendant denies the second sentence of paragraph 36.

37. Florida has designated areas within the ANERR as Outstanding Florida Waters, and Apalachicola Bay as an Aquatic Preserve. Both designations provide heightened legal protections beyond those afforded other waters of the State.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 37 and therefore denies them.

38. In addition, Florida has funded many of the natural resource management programs for the Apalachicola River and Bay. These protective efforts include the purchase of more than 329,000 acres within the Apalachicola Region. Of that total,

approximately one-third was purchased since January 1999, at a cost exceeding $120 million.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 38 and therefore denies them.

39. Florida continues to show a high level of commitment to Apalachicola preservation. This year's State budget included nearly $5 million for water quality restoration projects in the Apalachicola Bay estuary and for oyster shelling and research to help industry recovery.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 39 and therefore denies them.

40. In 2006, the Northwest Florida Water Management District, the State body responsible for water management in the Apalachicola River Basin, adopted rules that effectively preclude any further consumptive withdrawals of surface water from the Apalachicola River, the Chipola River, and the Chipola Cutoff. This extraordinary measure was undertaken expressly to protect the ecosystem of the Apalachicola Region.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 40 and therefore denies them.

41. Total land area within the Apalachicola River Basin acquired for conservation purposes by local, State, federal, and private actors exceeds an area 12 times larger than the District of Columbia.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 41 and therefore denies them.

The State of Georgia's Increasing Consumption of Water and its Adverse Impact on the Apalachicola River Basin and Bay

42. Georgia's water storage and consumption upstream of the Apalachicola River in the Chattahoochee and Flint River Basins has reduced Apalachicola River flows entering Florida. This reduction has damaged numerous species and habitats in the Apalachicola Region's ecosystem, and the overall economic, environmental, and social health and viability of the region.

Defendant denies the allegations in paragraph 42, as well as the section header that precedes it.

43. Georgia's storage and consumption causes significant economic injury to Florida. The River and Bay ecosystems provide important services to Florida's economy, and when these ecosystems are disrupted, these valuable services are placed at risk. The recent collapse of the oyster fishery in Apalachicola Bay is one example of the connection between the River and Bay ecosystems and the economy of the State.

Defendant denies the first sentence in paragraph 43. Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 43 and therefore denies them.

44. Long-term climatic data has not shown significant changes in precipitation. However, the amount of discharge to the rivers and streams of the ACF Basin generated by precipitation events has diminished over time. Changing climatic conditions cannot, therefore, explain reductions in inflows to the Apalachicola River.

Defendant denies the allegations in paragraph 44.

45. The primary uses of water in the Chattahoochee River Basin are municipal and industrial. The metro-Atlanta region presently withdraws and uses 360 million gallons per day ("mgd") in the upper Chattahoochee River. App. 6. Georgia expects its demands to nearly double from present levels and by 2040, expects to withdraw 705 mgd. App. 7.

Defendant admits that water in the Chattahoochee River Basin is used for municipal and industrial purposes, among other purposes. The remaining allegations purport to paraphrase a written document, which speaks for itself. To the extent the allegations in paragraph 45 mischaracterize the written document or are no longer based on current data, Defendant denies them. Except as specifically admitted herein, the allegations in paragraph 45 are denied.

46. The primary uses of water in the Flint River Basin are agricultural. Georgia has authorized agricultural users to withdraw and consume water from the Flint River Basin for irrigation purposes. These users irrigate approximately 563,000 acres

(879 square miles). Annual withdrawals vary considerably depending on the summertime precipitation patterns but withdrawals typically increase during drought periods. In addition to this existing irrigation, Georgia has granted applications to irrigate additional acreage in the Flint River Basin. These granted applications, when combined with existing irrigation, total 843,000 acres (1,317 square miles), and an area larger than the State of Rhode Island. Georgia also has numerous additional applications pending approval. A map prepared by the State of Georgia illustrating the location and density of agricultural wells in the Chattahoochee River and Flint River Basins is provided at App. 2.

Defendant admits that Plaintiff attached a map at App. 2 but lacks information sufficient to authenticate the map. Defendant further admits that water from the Flint River Basin is used for agricultural irrigation, among other purposes. The remaining allegations appear to characterize written documents, which speak for themselves. To the extent the allegations in paragraph 46 mischaracterize the written documents or are no longer based on current data, Defendant denies them. Except as specifically admitted herein, the allegations in paragraph 46 are denied.

47. In the Flint River Basin, agricultural irrigation represents the largest volume of water use. Of the total number of irrigated acres (563,000), approximately 160,000 acres are irrigated by diverting water directly from streams throughout the Basin. The irrigation corresponds with the hottest and driest times of the year when evapotranspiration

through crops is highest. Irrigation diversions from surface and groundwater sources cause streams and ground-water levels, which are naturally approaching their seasonally lowest levels, to decline even further.

Defendant denies that Georgia's water use caused Florida's alleged injuries. Defendant admits that water from the Flint River Basin is used for agricultural irrigation, among other purposes. The remaining allegations appear to characterize a written document, which speaks for itself. To the extent the allegations in paragraph 47 mischaracterize the written document or are no longer based on current data, Defendant denies them. Except as specifically admitted herein, the allegations in paragraph 47 are denied.

48. Approximately 120 mgd are withdrawn from the Flint River Basin for municipal and industrial use.

Defendant denies the allegations in paragraph 48.

49. Over 20,000 non-federal water impoundments of various sizes have been constructed in the ACF Basin in Georgia. These impoundments intercept flow which would otherwise discharge to the ACF river system. The cumulative impact of these impoundments is significant, particularly during dry periods. The beneficial effects to the Apalachicola River from rainfall events during dry periods are either attenuated or completely eliminated when the impoundments

intercept flow. Much of this impounded water never arrives downstream because of increased evaporative losses and agricultural withdrawals. These impoundments continue to be constructed in the Georgia portion of the ACF Basin.

Defendant admits that non-federal water impoundments exist in the Georgia portion of the ACF Basin. Defendant denies the remaining allegations in paragraph 49, except that it admits, on information and belief, the last sentence in paragraph 49. Except as specifically admitted herein, the allegations in paragraph 49 are denied.

50. The existing storage, evaporation, and consumption of water by Georgia's municipal, industrial, recreational, and agricultural users have diminished the amount of water entering Florida in spring and summer of drought years by as much as 3,000-4,000 cubic feet per second ("cfs"). This has altered the flow regime of the Apalachicola River during the most vulnerable times for riverine and estuarine species. In recent drought years, Apalachicola River flows averaged less than 5,500 cfs throughout the entire late-spring-summer-fall period from May through December. Such long durations of extremely low flows were unprecedented before 2000.

Defendant denies the first and second sentences of paragraph 50. Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 50, and therefore denies them.

51. As recognized by federal and state agencies, including the U.S. Geological Survey, well

pumping in Georgia's Flint River Basin directly affects the amount of water flowing in the Flint River and, thus, into Florida's Apalachicola Basin. *Stream-Aquifer Relations and the Potentiometric Surface of the Upper Floridan Aquifer in the Lower Apalachicola-Chattahoochee-Flint River Basin in part of Georgia, Florida, and Alabama* (USGS 2002).

Defendant denies that Georgia's water use caused Florida's alleged injuries. To the extent the allegations in paragraph 51 purport to characterize a publicly available document, the document speaks for itself. To the extent a response is required, Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 51 and therefore denies them.

52. As recognized by the U.S. Geological Survey, water level declines have caused substantial changes in the floodplain habitats throughout the Apalachicola River. *Water-Level Decline in the Apalachicola River, Florida, from 1954 to 2002, and Effects on Floodplain Habitats* (USGS 2006).

To the extent the allegations in paragraph 52 purport to characterize a publicly available document, the document speaks for itself. To the extent a response is required, Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 52 and therefore denies them.

53. As recognized by the U.S. Fish and Wildlife Service, upstream consumption is affecting threatened and endangered species and habitats

along the Apalachicola River. *See Biological Opinion on the U.S. Army Corps of Engineers, Mobile District, Revised Interim Operating Plan for Jim Woodruff Dam and the Associated Releases to the Apalachicola River* (USFWS 2012).

To the extent the allegations in paragraph 53 purport to characterize a publicly available document, the document speaks for itself. To the extent a response is required, Defendant denies the allegations in paragraph 53 to the extent they mischaracterize the U.S. Fish and Wildlife Service's Biological Opinion.

54. As a result of actions authorized by Georgia, Florida has already suffered harm of a serious magnitude to the Apalachicola Region's ecosystem and equities that arise from that ecosystem. Reduced freshwater inflows to the Apalachicola Bay over the past several years precipitated a collapse of the Apalachicola Bay oyster fishery, resulting in significant economic hardship to oystermen and others dependent upon oyster harvests.

Defendant denies the allegations in paragraph 54.

55. In 2012, Florida experienced the lowest average annual flow of the Apalachicola River in the 90-year period of record at the U.S. Geological Survey stream gage at Chattahoochee, Florida (immediately below Woodruff Dam). The average annual flow in 2012 was 65 percent lower than the average annual flow for 1923-2012. This record low flow year followed the fourth-lowest flow on record in

2011, resulting in an exceptionally low two-year period that was extremely harmful to species and habitats throughout the Apalachicola Region.

Defendant lacks information sufficient to form a belief about the truth of the allegations in paragraph 55 and therefore denies them.

56. The resulting low flows reduced available habitats in the Apalachicola River and thrust salinity levels in Apalachicola Bay above tolerable levels. Apalachicola Bay winter season oyster landings for 2012-2013 were 62.3 percent lower than the previous five year average and were the lowest ever recorded in Apalachicola Bay by the Florida Marine Fisheries Information System. Diminished harvest continues into the 2013-2014 winter season. As a result, the surrounding economy experienced a severe contraction and led Florida Governor Rick Scott to seek a declaration of a commercial fisheries failure for the oyster industry from the U.S. Department of Commerce, which was granted in August 2013.

Defendant admits, on information and belief, that Florida Governor Rick Scott sought a declaration of a commercial fisheries failure for the oyster industry from the U.S. Department of Commerce, which was granted. Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 56 and therefore denies them.

57. Georgia's continued and increasing use of water will further harm Floridians who rely upon the Apalachicola Bay. If inflows from the

Apalachicola River continue to be reduced, the productivity of the Bay will be irreparably harmed.

Defendant denies the first sentence in paragraph 57. Defendant lacks information sufficient to form a belief about the truth of the second sentence in paragraph 57 and therefore denies it.

58. Adverse impacts are equally acute on the Apalachicola River. Since 2006, thousands of threatened and endangered mussels have died as a result of low summer flows, the threatened Gulf sturgeon's spawning habitat has been rendered inaccessible, and habitat for freshwater fish spawning and recruitment, along with floodplain habitats, have been adversely affected.

Defendant denies that Georgia's water use caused Florida's alleged injuries. Defendant lacks information sufficient to form a belief about the truth of the remaining allegations in paragraph 58 and therefore denies them.

59. As Georgia's water uses grow, the amount of water entering Florida will continue to decrease, essential fish and wildlife habitats will constrict, and Florida will suffer additional irreparable harm. As Georgia's upstream storage and consumption grows over time, low flow events will become more frequent and increase in severity, diminishing the likelihood that key species will survive and precluding any chance of recovery over the long term.

Defendant denies the allegations in paragraph 59.

60. The situation is dire and the need for relief immediate. Florida has a right to its equitable share of the waters that have flowed historically to it from the Chattahoochee and Flint Rivers. Florida cannot and should not suffer injury in order to satiate Georgia's unrelenting thirst.

Defendant denies the allegations in paragraph 60.

PRAYER FOR RELIEF

Florida prays that the Court require Georgia to answer Florida's complaint, appoint a special master, and after due proceedings, enter a decree equitably apportioning the waters of the ACF Basin.

Florida further prays that the Court enter an order enjoining Georgia, its privies, assigns, lessees, and other persons claiming under it, from interfering with Florida's rights, and capping Georgia's overall depletive water uses at the level then existing on January 3, 1992.

Florida also prays that the Court award Florida any other relief that the Court may deem just and appropriate.

Defendant admits that a Special Master has been appointed in this case. Defendant denies that Florida has alleged facts showing that it is entitled to an equitable apportionment of the waters of the ACF Basin. Except as specifically admitted herein, the allegations in Florida's Prayer For Relief are denied.

AFFIRMATIVE DEFENSES

FIRST DEFENSE

Florida's claims are barred by the doctrine of estoppel. Outside of this case, Florida has taken positions that are inconsistent with the allegations in its Complaint. Those inconsistencies include the following: In a letter to the United States Department of Commerce requesting a declaration of a commercial fishery failure for the oyster fishery in the Apalachicola Bay, Florida Governor Rick Scott identified only "drought conditions for several years" and "overharvesting of illegal and sub-legal oysters" as "factors [that] ... led to the recent decline in oyster populations." Letter from Gov. Rick Scott to Ms. Rebecca Blank, Acting Secretary, U.S. Department of Commerce, at 2 (Sept. 6, 2012). Governor Scott did not claim that Georgia's alleged inequitable water use was a cause of the decline in oyster populations in the Apalachicola Bay.

In its Complaint, however, Florida now alleges that Georgia's alleged inequitable water use is the cause of the decline in oyster populations in the Apalachicola Bay. Those allegations are inconsistent with Governor Scott's representation to the Department of Commerce that the collapse was caused by drought conditions and illegal overharvesting. Florida should therefore be estopped from arguing that Georgia's allegedly inequitable water use caused a decline in oyster populations in the Apalachicola Bay.

SECOND DEFENSE

Florida's claims are barred by the doctrine of waiver. As noted above, in a letter to the United

States Department of Commerce requesting a declaration of a commercial fishery failure for the oyster fishery in the Apalachicola Bay, Florida Governor Rick Scott identified only "drought conditions for several years" and "overharvesting of illegal and sub-legal oysters" as "factors [that] ... led to the recent decline in oyster populations." Letter from Gov. Rick Scott to Ms. Rebecca Blank, Acting Secretary, U.S. Department of Commerce, at 2 (Sept. 6, 2012). Governor Scott did not claim that Georgia's allegedly inequitable water use was a cause of the decline in oyster populations in the Apalachicola Bay. By failing to claim in its letter to the Department of Commerce that the alleged decline in oyster populations in the Apalachicola Bay was caused by Georgia's allegedly inequitable water use, Florida has waived its ability to make that argument in this equitable apportionment action.

THIRD DEFENSE

Florida's claims are barred by the doctrine of unclean hands. Florida's own inequitable conduct in relation to the matter in controversy makes it unfair for Florida to obtain an equitable apportionment from Georgia:

(a) Florida's own inequitable conduct is responsible for some or all of the alleged decline in oyster populations in the Apalachicola Bay. Florida's inequitable conduct includes, but is not limited to, (i) permitting overharvesting of oysters in the Apalachicola Bay; (ii) permitting harvesting of illegal and sub-legal oysters in the Apalachicola Bay; (iii) failing to adopt an oyster lease system rather than maintaining an open-access fishery; (iv) failing to close an adequate portion of the bay to fishing as a

reserve stock; (v) failing to plant shells or requiring fisherman to re-shell oyster bars; and (vi) taking or consenting to actions and activities that increased the salinity in the Apalachicola Bay.

(b) Florida's own actions have destroyed, polluted, and reduced the habitats of certain wildlife, including sturgeon, mussel, and oyster species.

(c) The doctrine of unclean hands also prevents Florida from alleging that Georgia's agricultural water use is inequitable when Florida itself uses basin water for similar purposes. Florida alleges that Georgia's agricultural irrigation "cause streams and groundwater levels . . . to decline even further." Compl. ¶ 47. But Florida's own agricultural water use has grown significantly in the recent past. For example, in Jackson County, Florida—which is located almost entirely within the ACF Basin—the total number of irrigated acres nearly doubled between 2002 and 2007.

(d) Florida has failed to adopt reasonable conservation measures to protect and preserve water in the Apalachicola River and Bay. Florida cannot receive an equitable apportionment when it has failed to adopt reasonable conservation measures that could alleviate or mitigate the alleged harm.

FOURTH DEFENSE

Florida has failed to take steps to mitigate the harm and injury that it alleges in its Complaint. This failure to mitigate includes, but it is not limited to, Florida's failure to manage the Apalachicola Bay oyster fishery effectively, failure to implement sufficient water conservation programs in the ACF basin, failure to reduce waste, and failure to

undertake sufficient preservation activities to preserve the ecology and physical ecosystem of the Apalachicola Region.

FIFTH DEFENSE

Florida's claims are barred because any injury to Florida is attributable to an intervening and superseding cause. The Apalachicola River begins at the Woodruff Dam, and Florida complains that annual average flows calculated immediately below the Woodruff Dam have been at historic lows. Compl. ¶ 55. But Georgia has no control over the release of water from the Woodruff Dam; the complained flow rate is controlled exclusively by the United States Army Corps of Engineers. The Corps regulates the release flow from Woodruff Dam according to the ACF Master Water Control Manual, which is currently under revision with final approval planned for March 2017. Indeed, in prior litigation Florida claimed that "the Corps' actions in reducing releases for hydro[electric] power generation and navigation support have caused injury to . . . Florida, ***and compliance by the Corps*** with the laws at issue [in the MDL] ***will address those injuries.***"[1] The Corps' control of the Woodruff Dam is thus an intervening and superseding cause of any injury to Florida. That, in turn, means that Florida cannot attribute its alleged harm to conduct by Georgia and thus is not entitled to an equitable apportionment.

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[1] State of Alabama's and State of Florida's Joint Motion and Memorandum in Support of Joint Motions for Partial Judgment on all Phase I Claims, *In re Tri-State Water Rights Litig.*, No. 3:07-md-00001-PAM-JRK, ECF No. 191, at 10 (M.D. Fla.) (filed Jan. 23, 2009) (emphasis added).

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RECORD AND BRIEFS

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STATE OF FLORIDA,

PLAINTIFF,

v.

STATE OF GEORGIA,

DEFENDANT.

On Exceptions to the Report of the Special Master

AMICUS CURIAE BRIEF IN SUPPORT OF THE STATE OF GEORGIA BY THE ATLANTA REGIONAL COMMISSION DEKALB COUNTY, GEORGIA FORSYTH COUNTY, GEORGIA FULTON COUNTY, GEORGIA GWINNETT COUNTY, GEORGIA THE CITY OF ATLANTA, GEORGIA THE CITY OF GAINESVILLE, GEORGIA AND THE COBB COUNTY-MARIETTA WATER AUTHORITY

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2 Robert E. Clark, Waters And Water Rights, § 132.1 (1967) 22

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IDENTITY AND INTEREST OF *AMICI CURIAE*[1]

The Atlanta Regional Commission ("ARC") is a regional governmental entity composed of ten counties and the cities within them. As the Metropolitan Planning and Development Commission for Metropolitan Atlanta, ARC is responsible for coordinating and managing the planning, development, implementation, construction, management, and operation of regional water projects. It acts as the contracting and coordinating agent for local governments, and as the representative for local governments on matters related to reservoir and water supply operations by the United States Army Corps of Engineers (the "Corps").

The City of Atlanta, the City of Gainesville, DeKalb County, Fulton County, Forsyth County, and Gwinnett County are city and county governments in the Atlanta metropolitan area who use water from Lake Lanier and the Chattahoochee River for their public water supply. The Cobb County-Marietta Water Authority is a local government entity created by the Georgia General Assembly to provide water on a wholesale basis to Cobb County and its environs. It relies on the Chattahoochee River for approximately

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[1] The undersigned certify that counsel for a party did not author or pay for any part of this brief, and further that no person or entity other than the *Amici Curiae* made any monetary contribution to fund any part of the preparation or submission of this brief.

one-half of its water supply. Together, the *Amici Curiae* provide water from the Apalachicola-Chattahoochee-Flint ("ACF") River Basin to approximately 4 million residents and hundreds of thousands of businesses in Metropolitan Atlanta.

The *Amici Curiae* are all cities, counties, and political subdivisions of the State of Georgia, and the undersigned counsel are their authorized law officers for purposes of this case and controversy, including specifically the filing of this brief. Accordingly, no motion for leave is required under Rule 37.4.

STATEMENT OF THE CASE

Metropolitan Atlanta is the economic engine of the Southeast. According to the U.S. Census Bureau, it is the ninth most populous metropolitan statistical area in the United States and the fourth fastest growing in the nation.[2] It is home to approximately 5.8 million people; hundreds of thousands of businesses, including numerous Fortune 100 companies; major universities; military installations and defense contractors; and the world's busiest airport.[3]

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[2] U.S. Census Bureau, Estimates of Resident Population Change and Rankings, July 1, 2015 to July 1, 2016 – United States – Metropolitan Statistical Area; and for Puerto Rico, 2016 Population Estimates, http://bit.ly/2tQiV8m (last visited Aug. 6, 2017).

[3] *Id.*; Direct Testimony of Anna Kathryn Kirkpatrick, P.E. ("Kirkpatrick Direct") ¶¶ 9-12 (Dkt. #563).

Metropolitan Atlanta depends on the ACF Basin—in particular, Lake Lanier and the Chattahoochee River—as its primary water supply source. Direct Testimony of Peter Mayer, P.E. ("Mayer Direct") ¶¶ 24-25 (Dkt. #567). Of the 5.1 million Georgians who depend on the ACF Basin for water, almost 4.2 million reside in Metropolitan Atlanta, and the vast majority of these users have no other source of water supply. *Id.* ¶¶ 22-25.

Metropolitan Atlanta and the State of Georgia have taken substantial steps to conserve water and use more efficiently water withdrawn from the ACF Basin. These nationally-recognized efforts have been immensely successful.

In 2001, the Georgia General Assembly established the Metropolitan North Georgia Water Planning District (the "District" or "Metro Water District"), which is responsible for developing water supply and water conservation plans for the 15-county Metropolitan Atlanta area. *Id.* ¶ 54.[4] These plans, which have been revised and strengthened over the years, impose mandatory conservation and efficiency measures that must be implemented by the numerous water utilities under the District's jurisdiction. *Id.* ¶¶ 55-57; Kirkpatrick Direct ¶¶ 17-21. The requirements implemented through these plans have been recognized as "some of the most

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[4] The District is a State agency. It is staffed by Atlanta Regional Commission personnel, but the District and ARC are separate entities controlled by different boards.

significant and comprehensive water efficiency and conservation requirements in the United States." Mayer Direct ¶ 67. As a result of the District's work, per capita water withdrawals in Metropolitan Atlanta declined by 36.7%, from 155 gallons per capita per day ("gpcd") in 2000 to 98 gpcd in 2013—a level that, according to Florida's own expert, demonstrates that "'water conservation measures are being appropriately implemented.'" *Id.* ¶¶ 8, 43-50, Figures 7 & 8 (quoting Dracup Dep. 132:12-18); Tr. 3536 (Mayer).

Georgia and Metropolitan Atlanta have invested heavily in measures to reduce the amount of water lost from the municipal distribution systems that stretch across thousands of miles of underground mains and pipes in the Atlanta area. Georgia is a "national leader in water loss control and leak abatement," Tr. 3541 (Mayer), having "developed and implemented a nationally recognized water loss control program for public water systems across the state," Mayer Direct ¶ 9. In fact, "Georgia is one of just five states or regulatory entities in the United States to require water loss control measures on this scale," and "Georgia's programs far exceed any similar efforts in Florida." *Id.* ¶¶ 9, 64. The American Water Works Association—the Nation's leading organization of water professionals—has recognized Georgia as a national leader in this respect, specifically lauding its "'very comprehensive approach'" and its "'Water Loss Control Program Successes.'" *Id.* ¶ 63 (quoting American Water Works Assoc., 2016 Manual of Water Supply Practices–M36

Water Audits and Loss Control Programs, GX-847 at 22).

Water systems in Georgia have also devoted significant resources to addressing water loss. For instance, the City of Atlanta, which Florida's expert Dr. Sunding criticizes for its "old pipelines," repaired more than 10,000 leaks from 2012 to 2015, while allocating more than $55 million for distribution system rehabilitation and repair projects that will improve system reliability and decrease water loss. Mayer Direct ¶ 65. In the broader Metro Water District, between 2009 and 2014, water systems identified and repaired more than 42,000 leaks. *Id.*; Kirkpatrick Direct ¶ 22. Overall, these leak detection programs "far outpace those of Florida." Mayer Direct ¶ 64.

Further, more than 70% of the water withdrawn for use in the Metro Water District is reclaimed and returned to lakes, rivers, and streams within the ACF Basin. *Id.* ¶ 34. In other words, for every 100 gallons withdrawn by Metropolitan Atlanta utilities, 70 gallons are returned to the ACF Basin in the form of clean, high quality water for use downstream. By investing heavily in projects to return water to the ACF Basin after use, water utilities can expand water supplies and reduce impacts of water use by maximizing the benefits provided by existing infrastructure. *Id.* ¶ 74-76. Indeed, Gwinnett County, which is just one county in Metropolitan Atlanta, has alone spent more than $1 billion to construct and operate the F. Wayne Hill Water Resources Center, a state-of-the-art facility to return reclaimed water to

Lake Lanier for reuse. *Id.* ¶ 75. This facility alone is currently permitted by the State of Georgia to return 40 million gallons of water per day to Lake Lanier, and this amount is projected to increase to 60 million gallons per day by 2050. *Id.*

The overall effect of these programs has been dramatic. From 1994 to 2013, the population within Georgia served by ACF Basin water has increased by more than 1.6 million people. *Id.* ¶¶ 7, 30; Tr. 3531 (Mayer). And yet, as a result of the dramatic reductions in per capita withdrawals and substantial investments in returning water to the basin, described above, less water is being consumed today than in 1994. Mayer Direct ¶ 7. Driven by gains in Metropolitan Atlanta, municipal and industrial consumptive water use from the ACF Basin in Georgia declined by a remarkable 55 percent between 2000 and 2013, while total water withdrawals in Metropolitan Atlanta declined by 10 percent during the same period. *Id.* ¶¶ 35-36; Kirkpatrick Direct ¶ 26.

SUMMARY OF THE ARGUMENT

The Special Master is correct that Florida incontrovertibly bears the burden to prove by clear and convincing evidence that the remedy Florida requested would provide equitable redress. Because Florida failed to carry its burden on that point, its request for relief should be denied.

Florida asserts that the Special Master erred by requiring Florida to prove that a decree limiting Georgia's water use would remedy the harms it has

alleged. Florida's basic argument that the Court should reject the Special Master's Report because "equity will not suffer a wrong without a remedy," Exceptions 53, is misplaced. In a suit between two riparian jurisdictions, it is impossible to prove that one has suffered an "injury" or "wrong" due to "unreasonable" water use if one cannot show that a decree limiting the contested use would remedy the alleged harm. Because these elements are all intertwined, Florida would bear the burden to prove that an equitable remedy exists, even if its burden were limited (as Florida claims) to showing that it has been "injured" by Georgia's unreasonable water use.

Florida challenged two basic water uses in this case: municipal and industrial water use in Metropolitan Atlanta and agricultural water use in Southwest Georgia. In neither region would the damage inflicted on Georgia be remotely justified by the benefits of a consumption cap.

Cognizant of the weakness of its case, Florida asserts that its only burden was to prove that it has suffered "harm" resulting from a lack of water. But this argument is based on a misreading of *Colorado v. New Mexico*, 459 U.S. 176 (1982), which does not apply. The State of Colorado bore the burden of proof in *Colorado v. New Mexico* because the project it was asking the Supreme Court to authorize had already been adjudged to be unlawful based on the principle of prior appropriation, which both States followed.

Whichever State bears the burden of proof, the Court's past cases show that the equities *always* weigh heavily in favor of protecting existing users and providing water to existing economies. In fact, the Court has never entered a decree in an equitable apportionment case imposing any limit on an existing user, except as necessary to protect other existing users with vested rights and/or to supply water to an established economy.

To the extent Florida alleges injury to vague and abstract interests such as the "ecology" or "ecosystems" of the Apalachicola River and Bay, the Court should consider whether these claims are even justiciable. No manageable standards exist to quantify these alleged harms, let alone to determine how they compare to competing interests in Georgia. There might come a day when these types of claims are appropriate for judicial resolution; but before undertaking to strike this balance in the first instance, the Court should wait for a case in which the predicate scientific claims are clearly and fully proved, which here they are not.

ARGUMENT

I. The Special Master Correctly Required Florida to Prove by Clear and Convincing Evidence that a Decree Would Redress the Alleged Harm

The Special Master correctly concluded that Florida "incontrovertibly must bear the burden" to prove by clear and convincing evidence that a decree limiting Georgia's water use would redress the harm

Florida has alleged. Report 29 n.23. Based on the Special Master's holding that "Florida has not proven that its injury can be remedied" without a decree binding the Corps, *id.* at 31, Florida's request for relief should be denied.

Florida takes exception to the Special Master's conclusion that it was required to prove by clear and convincing evidence that the remedy it requested (a consumption cap) would provide equitable redress. Exception #2.b. Florida stakes much of its argument on the false premise that it is entitled to a remedy because "injury" has been established. Indeed, the thrust of Florida's entire brief is that "equity will not suffer a wrong without a remedy." Exceptions 53. This argument is misplaced given the nature of its claims.

As explained below, elements of liability, causation, and redressability are inseparable in a suit between riparians to curtail an allegedly unreasonable water use. It is impossible to prove that one has suffered an "injury" or "wrong" due to "unreasonable" water use if one cannot show that a decree limiting the contested use would remedy the alleged harm. Therefore, Florida would bear the burden to prove by clear and convincing evidence that an equitable remedy exists, even if its burden were limited (as Florida claims) to showing that it has been "injured" by Georgia's allegedly "unreasonable" water use.

A. The Special Master Did Not Find—and Florida Failed to Prove—that Florida Has Been "Injured" by Georgia's Water Use

Florida admits that "a State seeking to enjoin another State's 'invasion of rights' ... bears the burden of showing by clear and convincing evidence that it has been *injured*." Exceptions 34 (emphasis in original). "Injury," however, refers not just to "harm," but to harm *caused by* an "invasion of rights." *See* Restatement (Second) of Torts § 7 ("The word 'injury' is used ... to denote the fact that there has been an invasion of a legally protected interest...."); *see also New York v. New Jersey*, 256 U.S. 296, 309 (1921) (stating the complainant State must establish an "invasion of rights" by "clear and convincing evidence"); *Washington v. Oregon*, 297 U.S. 517, 522 (1936) (same).

Florida asserts that the Special Master made a finding that Florida has been injured, Exceptions 1, but he did not. The Special Master stated only that "Florida points to real harm," Report 31, without opining whether Georgia's water use, or some other factor such as extended regional droughts, had caused it. In fact, the Special Master expressly stated that "[m]uch more . . . would need to be said" about causation if the case could not be resolved on other grounds. *Id.* at 34.

Although the Special Master did not discuss this, Florida's failure to prove redressability *also* precludes a finding that Florida has been "injured" by "unreasonable" water use. This follows from the

"reasonable use" version of riparian rights that both Florida and Georgia follow. Report 30. There is no invasion of a riparian right unless the contested water use is "unreasonable."[5] But, "[i]f one water use causes no serious harm to another[,] it cannot be said to be unreasonable." Restatement (Second) of Torts § 850A; 93 C.J.S. Waters § 14 ("Any injury to a lower riparian owner incidental to the reasonable use of the stream by a higher riparian owner gives no right of redress, and a riparian owner who is not injured by the use may not interfere with it."). And if a decree limiting the contested use would not remedy the alleged harm, the contested use also cannot be said to have caused it. *See Paroline v. United States*, 134 S. Ct. 1710, 1722 (2014) (noting that the traditional way to prove that one thing caused another is to prove that the latter would not have occurred "but for" the former).

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[5] The original common law version of riparian rights emphasized downstream riparians' right to receive the "natural flow" of a water body over the upstream riparians' right to "reasonable use." In the modern version of riparian rights, however, the "primary interest" that is protected is the right "to make a reasonable use of the water," as distinguished from the right to receive natural flow. Restatement (Second) of Torts § 850(b). Both Georgia and Florida long ago abandoned the "natural flow" theory in favor of "reasonable use" as the basis of water allocation decisions. Fla. Stat. § 373.223 (adopting "reasonable-beneficial use" as the test for granting new permits); Ga. Comp. R. & Regs. R. 391-3-6-.07(8) (permits to be granted to meet "reasonable needs" provided the use will not cause "unreasonable adverse" effects).

It follows that Florida could not carry its burden on any element of its case—that Georgia's water use has caused harm to Florida, that Florida has been injured by Georgia's water use, or that Georgia's water use is "unreasonable"—if it cannot prove that an order limiting Georgia's water use will provide redress. Accordingly, the Special Master correctly concluded that Florida bore the burden of proof on redressability in particular.

B. Proof that a Decree Is Justified Requires Proof that It Will Provide Equitable Redress

Florida asserts that its burden to prove redressability should be reduced once "harm" has been established. In essence, Florida treats injury merely as a threshold requirement that must be proved, or not, before the Court will agree to hear a case, asserting that the "equation changes ... once this Court's jurisdiction is properly invoked." Exceptions 35. To the contrary, this Court has always required proof by clear and convincing evidence that any remedy is warranted before exercising its power, not just to entertain a claim, but especially "to control the conduct of one state at the suit of another." *Washington*, 297 U.S. at 523; *New York*, 256 U.S. at 309; *North Dakota v. Minnesota*, 263 U.S. 365, 374 (1923); *Connecticut v. Massachusetts*, 282 U.S. 660, 669 (1931); *Missouri v. Illinois*, 200 U.S. 496, 521 (1906).

It is a fundamental requirement of equitable apportionment that the Court will not issue a decree to vindicate an "abstract" or "barren" right. *See*

Connecticut, 282 U.S. at 669; *Washington*, 297 U.S. at 523. This principle militates against limiting water use in Georgia, because any such decree would inflict great harm on Georgia without providing meaningful benefits to Florida.

In *Washington v. Oregon*, Washington sought to enjoin Oregon irrigators from diverting substantially all of the flow of an interstate stream during droughts. The Court denied the injunction based on evidence that most of the water would be lost to Washington even were it not diverted. 297 U.S. at 523. Under these facts, the Court found that an injunction limiting the diversion "would materially injure Oregon users without a compensating benefit to Washington users." *Id.* (internal quotes omitted).

The principle is also illustrated in *Nebraska v. Wyoming*, 325 U.S. 589, 619 (1945), where it was used, not to dismiss a case, but to refine a decree. The Court declined to cut off junior appropriators in one section of the basin in Colorado, despite finding that senior users in Nebraska were experiencing shortages. Due to transit losses (losses of water to evaporation and seepage within the canal), the Court found that it was "highly speculative whether the water would reach the Nebraska appropriator in time or whether the closing of the Colorado canal would work more hardship there than it would bestow benefits in Nebraska." *Id.* at 619.

Nebraska v. Wyoming also demonstrates that the Court has more options than just constructing a "mass allocation" between States. Wyoming had

advocated for a decree declaring how much water each State was entitled to take, an approach similar to the statewide consumption cap Florida requests. The Court, however, held that there was no "hard and fast rule" requiring it to proceed in that manner. *Id.* at 622. Instead, the Court divided the river into six sections corresponding to naturally defined reaches of the river, and it apportioned each separately. *See id.* at 620. This procedure allowed the Court to enter a decree reflecting the priority of appropriators and the balance of equities in each section—allowing it to preserve existing development and provide water to established economies in each section.

In this case, the specific harms that Florida has alleged relate to both the quantity and timing of flows in the Apalachicola River and discharges into Apalachicola Bay. Florida must prove by clear and convincing evidence, therefore, not only that a decree limiting water use in Georgia would send more water to Florida, but also that Florida would receive (1) enough additional water (2) at the times when it is needed (3) to produce substantial benefits related to the specific harms it has alleged (4) that outweigh the harms such a decree would inflict on Georgia. Because Florida failed to prove even the first step in this chain, the Special Master correctly recommends that its request for relief be denied.

II. Florida Failed to Prove that Limiting Georgia's Water Use Would Redress Any Injury or Otherwise Benefit Florida

Florida challenged two basic water uses in this case: municipal and industrial water use in Metropolitan Atlanta and agricultural water use in Southwest Georgia. Each is addressed separately below. In neither region would the benefits of a decree remotely justify the damage inflicted on Georgia.

A. Florida Has Abandoned Any Argument that Water Use in Metropolitan Atlanta Is Excessive or Causes Harm to Florida

The Special Master's Report devotes scant attention to municipal and industrial water use in Metropolitan Atlanta, as Florida all but abandoned its case against this sector and region. The Special Master discussed it in a single footnote, stating it is not "clear" that "Georgia's municipal and industrial water use is unreasonable," and specifically recognizing that, "Georgia appears to have taken significant steps to conserve water in the Atlanta metropolitan region." Report 34 n.28. Florida did not take exception to this. To the contrary, Florida acknowledges in its Exceptions that most of the water still "at issue" is the water withdrawn from "the Flint River and lower Chattahoochee Basins." Exceptions 38.

The Special Master's footnote—and Florida's tacit acceptance of it—reflect the difficulty Florida

experienced in trying to sustain its allegations against Metropolitan Atlanta. Because Metropolitan Atlanta accesses water from a small corner of the basin (representing only about 6 percent of its land area), most of the water in the ACF Basin enters below, and therefore is not affected by, Metropolitan Atlanta. *See* JX-124 at 2-24, Table 2.1-3. Further, because Metropolitan Atlanta only withdraws a small portion of the water in this part of the basin and further returns 70 percent of the water it withdraws, it reduces stream flow at the Georgia-Florida line by only a tiny fraction. Mayer Direct ¶¶ 41-42 & Figure 6. Not surprisingly, therefore, the evidence at trial showed that a decree limiting water use in Metropolitan Atlanta would inflict great harm to achieve little, if any, benefit downstream in Florida. *Id.* ¶¶ 41-42, 126-133, Figures 6 & 11; Tr. 3544-46, 3548-56 (Mayer). Two independent studies by federal agencies—the Environmental Impact Statement ("EIS") prepared by the United States Army Corps of Engineers[6] and a Biological Opinion prepared by the

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[6] U.S. Army Corps of Engineers, Final Environmental Impact Statement, Update of the Water Control Manual for the ACF River Basin and a Water Supply Storage Assessment (Dec. 2016) ("Final EIS"), *available at* https://goo.gl/5kPcZD. The Draft EIS is in the record in this case. JX-124. In its *amicus* brief, the United States informed the Special Master that the Final EIS did not change the Corps' operations from those presented at trial under the Draft EIS in a manner material to the case. Special Master Report 35-36 n.29. The Special Master therefore relied on the Draft EIS and took judicial notice of the Final EIS as needed. *Id.* Accordingly, the *Amici* submit this Court can take note that the findings discussed in the Draft EIS were not changed in the Final EIS.

United States Fish and Wildlife Service[7]—confirm this point.

The EIS is of particular interest because it confirms that limiting Metropolitan Atlanta's water use would not benefit Florida no matter how the Corps operates its reservoirs. The EIS was prepared as part of an effort by the Corps to develop a new Master Manual for the Corps reservoirs on the Chattahoochee River. The purpose was to determine how the reservoirs should operate to balance all authorized purposes, including water supply as well as the protection of fish and wildlife.[8] The Corps examined the effects of widely divergent levels of consumptive use in Metropolitan Atlanta, which ranged from amounts that are far less than what is consumed today to increases in use reflecting Metropolitan Atlanta's projected water supply needs through 2050. The Corps found that even substantially increased consumptive water use in Metropolitan Atlanta would have "negligible" effects on Florida, resulting in "little change in flow conditions in the Apalachicola River downstream of

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[7] U.S. Fish & Wildlife Service Biological Opinion on the U.S. Army Corps of Engineers Update of the Water Control Manual for the ACF Basin (2016), JX-168.

[8] Final EIS, *supra* note 6, at ES-2 ("[T]he purpose and need for the federal action is to determine how USACE projects in the ACF Basin should be operated for their authorized purposes, in light of current conditions and applicable law, and to implement those operations through updated water control plans and manuals."); *see* JX-124 at ES-4 (Draft EIS purpose and need statement).

Jim Woodruff Lock and Dam," and "no incremental effect on freshwater inflows to Apalachicola Bay." Final EIS at 6-93, 6-98.[9]

The Fish and Wildlife Service reached the same conclusion in the Biological Opinion released on October 6, 2016. JX-168. Based on its own independent review, the Service concluded that any impacts to threatened and endangered species in the Apalachicola River would be the result of the Corps' reservoir operations, as distinguished from consumptive uses of water in Metropolitan Atlanta.[10]

B. Florida Failed to Prove that Limiting Georgia's Water Use Would Benefit Florida

Florida also failed to prove that water use should be limited in Southwest Georgia. The Special Master correctly concluded that "Florida has not proven by clear and convincing evidence that any additional streamflow in the Flint River or in the Chattahoochee River would be released from Jim Woodruff Dam into the Apalachicola River at a time

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[9] *See* JX-124 at 6-71 (flow conditions below Jim Woodruff Lock and Dam for all alternatives), 6-75 (flow conditions below Jim Woodruff for the Proposed Action Alternative).

[10] JX-168 at 99 (Gulf sturgeon), 187 (mussels) ("To the extent the consumptive use assumptions are accurate, differences between the Baseline and the simulated flows of the [proposed Water Control Manual] are due to differences in reservoir operations.").

that would provide a material benefit to Florida." Report 47.

Rather than pointing to the evidence adduced at trial, Florida asks the Court to accept on faith that "[l]imiting consumptive uses *necessarily* increases basin inflow," Exceptions 47 (emphasis in original), thus producing "benefits" in the form of "higher minimum flows" that would "provide real redress," *id.* at 47-48. These vague assertions provide no basis for the Court to evaluate the benefits of a decree. "[F]ar from being established by clear and convincing evidence," the vague, speculative benefit that Florida alleges—like the alleged harm in *Connecticut v. Massachusetts*—"is not shown by evidence making it possible of computation or proving that it is large." *See Connecticut*, 282 U.S. at 666-67.

Much more information would be required to justify the damage that a decree limiting water use in Georgia would inflict. It is necessary to know not only that some additional water would in fact be delivered to Florida, but how much, and at what times. Only then would it be possible for this Court to determine if any water "saved" by a decree would be delivered to Florida in quantities and at times that would produce material benefits.

Furthermore, the potential benefits of a decree should be measured, not in gallons of water, but in real benefits to the people and ecosystems that Florida claims have been harmed. For example, to the extent Florida alleges that additional flow would improve conditions for oysters in Apalachicola Bay, it

was incumbent on Florida to prove that additional flow on the scale that could be produced by a decree will actually make a difference. By the reckoning of Florida's own expert, however, the most that could be hoped for by capping Georgia's consumption at a level far below what is being used today is an approximately 1.2 percent increase in oyster biomass. Direct Testimony of J. Wilson White, Ph.D. ¶¶ 152-53, Figures 14 & 15 (Dkt. 558); Tr. 4409-4411 (Lipcius); Tr. 1724-25 (White).

Florida's other evidence of "benefits" was equally uncompelling. For instance, Florida's own evidence showed that the draconian cap Florida requested would result in only trivial changes in Apalachicola Bay salinities—on the order of 1 part per thousand—under the very worst drought conditions in history. Direct Testimony of Marcia Greenblatt, Ph.D., P.E., at 32-33, 36, Figures 3-11, 3-12 & 3-15 (Dkt. 542). There would be no benefit at all in normal years. *Id.* at 34, 37, Figures 3-13 & 3-16.

And Florida's own ecological expert testified that the draconian water-use restrictions Florida seeks would benefit Tupelo trees in the Apalachicola River floodplain on just 29 days—total—over a 16-year period. Asked whether this would "have any impact at all on the population of tupelo ... trees in the Apalachicola," Florida's expert responded, "I don't know." Tr. 546 (Allan).

In short, the Special Master's conclusion that limiting Georgia's water use would provide no material benefit to Florida is consistent, not only

with every objective analysis that has ever been done, but with Florida's own evidence. Report 47. As Special Master explained, the evidence "tends to show that," even to the extent reducing Georgia's water use would result in "additional state-line flows," any benefits to Florida are "likely rare and unpredictable," Report 68. It would be a travesty to destroy Georgia's economy to achieve such trivial and uncertain benefits.

III. As Complainant, Florida Bears the Burden to Prove that Its Rights Have Been Invaded and that an Equitable Remedy Exists

Florida asserts that its only burden is to prove that it has suffered harm due to low flows, after which point the Court should divide the waters by balancing equities without any presumption in favor of either State or any specific outcome. Exceptions 35-36. This argument is based on a misinterpretation of *Colorado v. New Mexico* and a mistaken view that this Court should function, not as a judicial body adjudicating a concrete claim, but as a diplomatic alternative to armed conflict. Exceptions 54-55.

Without resolving the burden-shifting issue, the Special Master noted that it is "not altogether straightforward" to apply *Colorado v. New Mexico* to a dispute between two riparian jurisdictions. Report 29 n.23. The *Amici* thus offer the following analysis.

The two *Colorado v. New Mexico* decisions are best understood as outlining the limited role of equitable balancing in equitable apportionment cases. Notwithstanding broad *dicta* to the contrary, a

close reading of past equitable apportionment cases reveals that the Court has never employed equitable balancing in the open-ended manner Florida suggests—that is, without tilting the scale toward the *status quo* defined by the existing legal relations between the States.[11] The Court has used equitable balancing only in the sense of determining whether to enforce "paper" rights—that is, in deciding whether some water rights must fail "to the extent equity requires." *Washington*, 297 U.S. at 527. In this context, *Colorado v. New Mexico* establishes that equitable balancing can be invoked in equitable apportionment cases to create exceptions to the presumptive result supplied by local law, but only rarely, and only if the State seeking the exception can prove by clear and convincing evidence that such extraordinary relief is justified.

The key to *Colorado v. New Mexico* is that it was brought by the upstream state (Colorado) to authorize a diversion that had already been enjoined by a federal court applying principles of prior appropriation that both States followed. The dispute

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[11] *See, e.g.*, 2 Robert E. Clark, Waters And Water Rights, § 132.1 (1967) ("'Equitable apportionment,' however, is a label, not an analysis."); A. Dan Tarlock, Law Of Water Rights And Resources § 10:15 (July 2017 Update) (noting that, while the Court has always reserved the power to displace state law when considerations of equity require it, "among states with the same water law, the Court has applied the common water law of the party states. Thus, prior appropriation applies among appropriation states, pure or dual, and riparian rights applies among common law states").

was about the Vermejo River, which had been fully appropriated by long-established users in New Mexico. A private entity in Colorado sought to engineer a transmountain diversion to supply speculative industrial development. *Colorado v. New Mexico*, 459 U.S. 176, 178-79 (1982) ("*Colorado I*"). When a federal district court enjoined the proposed diversion, Colorado sued New Mexico seeking an equitable apportionment. *Id.*

In the first of two opinions, the Court affirmed its power to overturn the presumptive result under local law by undertaking an "equitable balancing" of benefits and harms. Over strong objections expressed by Justice O'Connor in a concurring opinion, the Court held that an out-of-priority diversion might theoretically be allowed if Colorado could prove: (1) that New Mexico could mitigate the harm to prior appropriators in New Mexico caused by Colorado's proposed diversion by adopting reasonable conservation measures, and (2) that any remaining harm to New Mexico would be more than offset by benefits to Colorado. In her concurrence, a troubled Justice O'Connor wrote that, by even admitting the possibility that such factors could be considered, the Court had gone "dangerously far toward accepting [the] suggestion . . . that it is appropriate in equitable apportionment litigation to weigh the harms and benefits to competing States." *Id.* at 193 (O'Connor, J. concurring). Justice O'Connor noted that past Courts had engaged in this type of balancing only in the rarest of cases:

> [T]his Court has never undertaken that balancing task outside the concrete context of either two established economies in the competing States dependent upon the waters to be apportioned or of a proposed diversion in one State to satisfy a demonstrable need for a potable supply of drinking water. In the former context, the Court may assess the relative benefit and detriment by reference to the actual fruits of use of the waters in the respective States. In the latter context, the compelling nature of the proposed use reduces the speculation that might otherwise attend assessment of the benefits of a proposed diversion. Where, as here, however, no existing economy in Colorado depends on the waters of the Vermejo and the actual uses in New Mexico rank in equal importance with the proposed uses in Colorado, the difficulty of arriving at the proper balance is especially great.

Id.

The Court then remanded the case to the Special Master for additional fact-finding. When it returned, Justice O'Connor wrote for the 8-1 majority, which found that Colorado had failed to prove that the

equities favored granting an exception to the rule of priority. *Colorado v. New Mexico*, 467 U.S. 310 (1984) ("*Colorado II*"). Justice O'Connor emphasized that, like all other facts in an equitable apportionment proceeding, the factors weighed in the equitable balance must be proved by "clear and convincing evidence." *Id.* at 315-16. Justice O'Connor then explained that this standard requires the party with the burden to inspire in the factfinder "an abiding conviction that the truth of its factual contentions are [sic] highly probable." *Id.* at 316 (internal quotes omitted). This demanding standard will be satisfied only if the proof "*instantly* tilt[s] the evidentiary scales in the affirmative when weighed against the evidence . . . offered in opposition." *Id.* (emphasis added).

Together, the two decisions in *Colorado v. New Mexico* establish that the State seeking to use equitable balancing to enjoin a use that would be allowed under local law, or to allow a use that would be prohibited under local law, bears an especially heavy burden to prove that an exception to the locally accepted rule should be granted. This ensures that the State seeking such extraordinary relief "bear[s] most, though not all, of the risks of an erroneous decision." *Colorado II*, 467 U.S. at 316.[12]

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[12] *See* A. Dan Tarlock, *The Law of Equitable Apportionment Revisited, Updated and Restated*, 56 U. Colo. L. Rev. 381, 407 (1985).

Occasions to invoke the burden-shifting framework of *Colorado v. New Mexico* will be rare in cases between riparian States. In contrast to appropriative rights, which are pre-quantified, the scope of the riparian right—what is "reasonable"—can only be determined by balancing benefits and harms.[13] In *Colorado v. New Mexico*, the legal relationship between the parties—the fact that New Mexico had a pre-existing legal right to all of the water Colorado sought to take—had been established conclusively before Colorado even filed suit. As the State seeking to disrupt the legal *status quo*, Colorado appropriately bore a heavy burden of proof. That pattern will rarely repeat itself in suits between riparian jurisdictions.

Any exceptions would likely involve water uses considered unreasonable *per se* in riparian states. For example, the original common law version of riparian rights prohibited all interbasin transfers of water as a matter of law. Neither Florida nor Georgia follows this rule;[14] but in states that do, interbasin transfers

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[13] 1-7 Amy Kelley & Robert Beck, Waters And Water Rights § 7.02 ("Reasonable use theory almost necessarily requires courts to compare the benefit of one use against the benefit of another, incompatible use, to determine which use is reasonable.... Basically, courts will decide whether a use is reasonable by comparing the economic and social cost to the plaintiff caused by the defendant's conduct to the economic and social cost to the defendant of modifying the defendant's conduct to accommodate the plaintiff's use.")

[14] Like other regulated riparian jurisdictions, Georgia and Florida abandoned the prohibition against interbasin transfers

can be enjoined based on nominal damages, without any showing of harm.[15] In a case between two States that both followed that rule, the burden-shifting framework of *Colorado v. New Mexico* might be invoked to authorize an interbasin transfer that would be prohibited under the accepted local rule.

This is precisely what happened in *New Jersey v. New York*, 283 U.S. 336 (1931), in which New York proposed to construct a major new project to transport water from the Delaware River Basin to the Hudson River Basin to supply New York City. New Jersey had a clear right to enjoin New York's proposed diversion under the common law rule that both States followed.[16] New York was thus in the position of Colorado in *Colorado v. New Mexico*, which would require it to prove by clear and convincing evidence that an exception to the local prohibition was warranted. Although the Court did not explain its decision in these terms, the analysis presented above does explain the result. The Court declared that it would not enforce a "strict

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long ago. *See* Fla. Stat. § 373.223(2) (authorizing interbasin transfers); O.C.G.A. § 12-5-31(n) (same).

[15] *See, e.g., Parker v. Griswold*, 17 Conn. 288 (1846) (holding a riparian landowner can maintain an action against an out-of-basin water use without proving actual damage).

[16] *See, e.g.*, Report of the Special Master, *New Jersey v. New York*, Orig. No. 16 (Oct. Term 1930), 283 U.S. Sup. Ct. Records and Briefs Part 7, at 21 ("Special Master's Report") ("[I]f the strict rule of common law is . . . applicable, it must necessarily follow that New Jersey is entitled to an injunction....").

application" of the local law because the transfer was needed to serve the "high public purpose" of providing drinking water to a major city that needed it.[17]

The Court did limit the proposed diversion for New York City, allowing New York to take only 75 percent of the water it originally sought. This is not surprising, given that New York bore the burden to justify its use, as explained above. Furthermore, the Court allowed New York to take the vast majority of the water it sought, which was enough to satisfy substantial future needs. The decree thus reflects the limit of the Court's willingness to authorize a use prohibited by local law to satisfy speculative, distant future needs—an issue that is not presented in this case. In addition, the Court issued an "open decree" allowing the parties to seek modifications in the future, if necessary; and the Court subsequently modified the 1931 decree in 1954 to allow an even larger diversion than New York had originally requested. *New Jersey v. New York*, 347 U.S. 995 (1954).

In this case, in contrast to both *New Jersey v. New York* and Colorado *v. New Mexico*, Florida does not allege that Georgia's water is unreasonable *per se*, and there is no other basis for Florida to claim

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[17] *See id.* at 39 (finding the proposed diversion to be "for a reasonable purpose and, indeed, a high public purpose"); *see also Connecticut*, 282 U.S. at 673 ("Drinking and other domestic purposes are the highest uses of water.").

that Georgia's use is presumptively unlawful. Therefore, *Colorado v. New Mexico* does not apply, and Florida cannot be relieved of its burden as the complainant to prove the elements of its claim—including that an "invasion of rights" has occurred, as well as the availability of equitable redress. *New York*, 256 U.S. at 309; *Connecticut*, 282 U.S. at 669; *Washington*, 297 U.S. at 524. *See also Colorado v. Kansas*, 320 U.S. 383, 391 (1943) (rejecting Colorado's argument that the Court's dismissal of *Kansas v. Colorado* in 1906 amounted to an allocation of the river, stating that Kansas "labored under a burden of proof applicable in litigation between quasi-sovereign states.").

IV. The Court Has Used Equitable Balancing to Alter the Legal Status Quo Only to Protect Established Users and Existing Economies

Whichever State bears the burden of proof, the Court's past cases show that the equities *always* weigh heavily in favor of protecting existing users and providing water to existing economies. In fact, in the limited universe of equitable apportionment cases, the Court has never entered a decree imposing any limit on an existing user, except as necessary to protect other existing users with vested rights and/or to supply water to an established economy.

The Court first recognized its power to apportion interstate waters as a matter of federal common law in *Kansas v. Colorado*, 206 U.S. 46 (1907). A special federal rule of decision was needed in that case because the two States had developed different water laws reflecting starkly different policy preferences.

Kansas, the downstream state, was at that time a common law riparian state. Based on its own riparian law, Kansas asserted it was entitled to receive the natural flow of the Arkansas River "undiminished" in quantity or quality.[18] Kansas further asserted that it was entitled to an injunction to prevent Colorado from diverting any water from the river and thus interfering with its natural flow. Colorado, in contrast, pioneered the law of "prior appropriation," which is now followed in most Western states. Prior appropriation emphasizes the right to appropriate water for beneficial uses by giving the first person to do so a right superior to subsequent users. Consistent with this doctrine, Colorado claimed that it was entitled to appropriate the entire Arkansas River to the extent it could use the water beneficially. *Id.* at 98.

The Court rejected both extreme theories on grounds that neither state could impose its policy preference on the other. It concluded that its role was "to settle [the] dispute in such a way as will recognize the equal rights of both [states] and at the same time do justice between them." *Id.* The Court then ruled for Colorado. It agreed that Colorado had caused "perceptible injury"—as the flow of the river had indeed been diminished to Kansas's detriment—but it held that the injury to Kansas was outweighed by "the great benefit" inuring to Colorado. *Id.* at 117, 114. It thus dismissed the case without prejudice,

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[18] As discussed above, *supra* note 5, neither Florida nor Georgia adheres to this rule.

instructing Kansas that it could file again if Colorado's uses grew to the point that "substantial interests" of Kansas were being injured "to the extent of destroying the equitable apportionment of benefits . . . resulting from the flow of the river." *Id.* at 118.

Notwithstanding the broad principles announced in *Kansas v. Colorado*, the Court retreated from equitable balancing in subsequent cases between States that follow the same law. The Court discussed this issue at great length in *Wyoming v. Colorado*, 259 U.S. 419 (1922), in which Wyoming sought to prevent Colorado from constructing a tunnel to divert water from the Laramie River to reclaim arid Colorado lands. *Id.* at 490. Both States followed the doctrine of prior appropriation. Wyoming argued the proposed diversion would infringe vested water rights, while Colorado argued that its out-of-priority diversion should be allowed because it could "accomplish more with the water than Wyoming does or can." *Id.* at 468. The Court rejected Colorado's argument. Because both States followed the rule of priority, the Court held that the local rule "furnishe[d] the only basis . . . consonant with the principles of right and equity" on which the controversy could be decided. *Id.* at 470.

The next two cases—*Connecticut v. Massachusetts*, 282 U.S. 660 (1931), and *New Jersey v. New York*, 283 U.S. 336 (1931)—are the two most important exceptions to the Court's usual adherence to State water law. As explained above, the Court in both cases allowed large interbasin transfers that would have been prohibited under the law of both

States, justifying this result based on the "high public purpose" of supplying water to a major city that needed it.[19] It was in this context that Justice Holmes famously declared that the aim of equitable apportionment "always is to secure an equitable apportionment without quibbling over formulas." *New Jersey*, 283 U.S. at 343.

Finally, the last equitable apportionment decree was entered in *Nebraska v. Wyoming*, 325 U.S. 589 (1945). Again, the Court determined that the water allocation rule followed by both States would effectuate the most equitable apportionment. The Court thus fashioned a decree based on the priority of appropriators in each of six different sections. The decree is notable, not only for its fidelity to the principles of prior appropriation in the main, but also for the one limited exception to this general rule. In one of the six sections, the Court declined to enjoin substantial out-of-priority diversions in Colorado that were already the basis of a thriving local economy. The Court explained:

> Strict application of the priority rule might well result in placing a limitation on Colorado's present use for the benefit of [Nebraska]. But as we have said, priority of appropriation, while the guiding principle for an apportionment, is not a hard and fast rule. Colorado's

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[19] *See, e.g., supra* note 17.

> countervailing equities indicate it should not be strictly adhered to in this situation.

Id. at 622.

Nebraska v. Wyoming is consistent with the Court's general pattern of adhering to local law and departing from it only when necessary to protect existing users or provide additional water to established economies. When viewed against this history, Florida's claims are truly extraordinary.

V. If Florida's Claims Alleging Environmental Harm Are Even Justiciable, They Should Be Subject to a Heightened Standard of Proof

To the extent Florida alleges injury to vague and abstract interests such as the "ecology" or "ecosystems" of the Apalachicola River and Bay, the Court should consider whether these claims are even justiciable. Without discounting the importance of these interests, the Court should recognize that no standards exist to determine how they should be valued and prioritized in relation to competing economic interests in Georgia. To the extent Congress has addressed these issues, its conclusions are embodied in federal statutes that Florida evidently believes do not go far enough. But, as the very limits of the federal statutes make clear, no standards exist to guide the Court in determining how much further to go.

In *Vieth v. Jubelirer*, the Court emphasized that the "judicial power" under Article III "is not whatever

judges choose to do . . . [but] the power to act in the manner traditional for English and American courts." 541 U.S. 267, 277-78 (2004). "That 'traditional role' involves the application of some manageable and cognizable standard within the competence of the Judiciary to ascertain and employ to the facts of a concrete case." *Zivotofsky v. Clinton*, 566 U.S. 189, 203-04 (2012) (Sotomayor, J., concurring). "When a court is given no standard by which to adjudicate a dispute, or cannot resolve a dispute in the absence of a yet-unmade policy determination charged to a political branch, resolution of the suit is beyond the judicial role envisioned by Article III." *Id.*

No generally accepted standards exist to quantify the interests Florida asserts, much less determine how they compare to competing interests in Georgia. How much harm Georgia should have to bear to "help[] the Apalachicola ecosystems rejuvenate," Exceptions 51, or to ensure that Florida's "iconic Tupelo tree" maintains its dominance in the forest? And how is the Court to evaluate the alleged benefit of Florida's proposed water-use restrictions, which, according to its own ecological expert, would provide additional water for these trees on just 29 days over 16 years (less than 2 days per year)? The balance between preserving natural areas and making productive use of natural resources is an issue that all states confront. The balance has been struck in different ways in different places. Every major city was once a wilderness, and every so-called wilderness has been changed and affected by humans. How much change is too much—and whether any given change should be considered

good or bad—are policy questions as to which no consensus exists. These are questions that cannot be decided "without an initial policy determination of a kind clearly for nonjudicial discretion." *Baker v. Carr*, 369 U.S. 186, 217 (1962).

The difficulties described by Justice O'Connor in her concurrence in *Colorado I* pale by comparison to this case. *See* 459 U.S. at 193. The competing uses of the Vermejo River that troubled Justice O'Connor were at least competing economic interests. Florida's case, in contrast, pits traditional domestic and agricultural demands in Georgia against the unquantified and poorly understood demands of "ecosystems" and "ecological processes." These interests are difficult to quantify and virtually impossible to value and weigh against competing interests in Georgia.

The policy choices become even murkier when one considers the impacts to the Apalachicola River and Bay that Florida has not only allowed but in many cases encouraged. The State of Florida urged and supported the development of "Sikes Cut," a navigation cut through St. George Island that allows salty Gulf waters into the bay. The native sturgeon population in the Apalachicola River was almost eliminated in the 20th century by the combined effects of severe overfishing perpetrated by a commercial fishery at the Port of Apalachicola, Florida, and the construction of dams that block access to historic sturgeon spawning grounds in the Chattahoochee River. *See* 2016 Biological Opinion. JX-168 at 62. Tate's Hell Swamp, a major tributary

to Apalachicola Bay located entirely within Florida, has been ditched and drained and converted to pine plantations. *See* Direct Testimony of Charles Menzie, Ph.D. ¶¶ 183-85 (Dkt. #569). The list goes on. The point is not that any of these impacts is unacceptable, but that it would be entirely arbitrary to declare them permissible while at the same time declaring that any impacts caused by Georgia's activities are not.

If it will ever be appropriate for this Court to strike that balance, the Court should wait for a case in which the scientific and factual claims are "clearly and fully proved." *See Missouri*, 200 U.S. at 521. Only then can the Court be certain that the "principle to be applied [is] one which the [C]ourt is prepared deliberately to maintain against all considerations on the other side." *Id.*

CONCLUSION

In sum, Florida bears the burden to prove all elements of its claim against Georgia by clear and convincing evidence, including the availability of equitable redress. Florida has failed to prove that a decree limiting Georgia's consumptive uses of water would increase the state-line flows at all, let alone to show that enough additional water would be produced at the right times to have any material effect on the complex ecological harms Florida has asserted. Accordingly, Florida's request for relief should be denied.

Respectfully submitted,

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STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

STATE OF COLORADO'S BRIEF AS *AMICUS CURIAE* IN OPPOSITION TO FLORIDA'S EXCEPTIONS

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IDENTITY AND INTEREST OF *AMICUS CURIAE*

Colorado straddles the Continental Divide, where snowmelt from the Rocky Mountains fills the headwaters of many of the nation's major rivers, including the Platte, Arkansas, Rio Grande, and Colorado. *See* Justice Gregory J. Hobbs, Jr., *Protecting Prior Appropriation Water Rights through Integrating Tributary Groundwater: Colorado's Experience*, 47 Idaho L. Rev. 5, 9 (2010). These river systems provide water to eighteen different States, a number of Indian Tribes, and the Republic of Mexico.[1] With respect to these and other rivers originating in the State, Colorado has been a party to court proceedings and negotiations that have resulted in nine interstate compacts and two equitable apportionment decrees.[2] Colorado is also

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[1] *See, e.g.*, Convention of May 21, 1906 on the Equitable Distribution of the Waters of the Rio Grande, available at http://www.ibwc.gov/Files/1906Conv.pdf; Treaty between the United States of America and Mexico Respecting Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, U.S. Mex., Feb. 3, 1944, 59 Stat. 1219.

[2] Colorado River Compact, codified at C.R.S. 37-61-101 *et seq.* (2017); Upper Colorado River Compact, codified at C.R.S. 37-62-101 *et seq.* (2017); La Plata River Compact, codified at C.R.S. 37-63-101 *et seq.* (2017); Animas-La Plata Project Compact, codified at C.R.S. 37-64-101 *et seq.* (2017); South Platte River Compact, codified at C.R.S. 37-65-101 *et seq.* (2017); Rio Grande River Compact, codified at C.R.S. 37-66-101 *et seq.* (2017); Republican River Compact, codified at C.R.S. 37-67-101 *et seq.* (2017); Amended Costilla Creek Compact, codified at C.R.S. 37-68-101 *et seq.* (2017); Arkansas River Compact, codified at C.R.S. 37-69-101 *et seq.* (2017); *see also Nebraska v. Wyoming*, 325 U.S. 589 (1945); *Wyoming v. Colorado*, 259 U.S. 419 (1922).

home to several other interstate rivers and streams that are not yet subject to equitable apportionment decrees or compacts.

Given Colorado's long history of navigating the complex legal issues attendant to interstate water disputes, it has a strong interest in the burden of proof that applies in equitable apportionment cases. Accordingly, Colorado submitted an amicus brief before the Special Master addressing that question. Now, Florida takes exception to the Special Master's recommendation that Florida must prove its case by clear and convincing evidence. Fla. Br. in Support of Exceptions at 34. Colorado continues to take no position on the merits of Florida's case. But Colorado remains interested in this dispute because a decision on the burden-of-proof question could potentially inform the limits and extent of Colorado's rights and obligations under its existing equitable apportionment decrees, as well the legal backdrop against which it will be required to apportion water in the future.

SUMMARY OF ARGUMENT

Equitable apportionment of an interstate stream is a complex matter requiring a careful touch. It involves consideration of a wide range of interests, including the sovereign interests of affected States and the health and economic well-being of citizens within those States. For nearly a century, the Court has wrestled with "the problem of apportionment and the

delicate adjustment of interests which must be made." *Nebraska v. Wyoming*, 325 U.S. 589, 618 (1945). Throughout that time, the Court has consistently made clear that the complaining State faces a heavy burden to prove both its injury and its right to relief by clear and convincing evidence. This burden is justified because of the potentially grave consequences of an equitable apportionment decree inadequately supported by the evidence. *See, e.g.*, *Washington v. Oregon*, 297 U.S. 517, 529 (1936) (emphasizing the danger of "destroying possessory interests enjoyed without challenge for over half a century").

The heightened burden for interstate litigation applies throughout the entire course of an equitable apportionment proceeding. This Court has never held, as Florida suggests, that the burden decreases, or "the equation changes," after a complaining State has proven only part of its case, namely, an alleged injury. Fla. Br. in Support of Exceptions at 35. Rather, the harms and benefits that an equitable apportionment is intended to adjust must be quantified by sufficient evidence to allow the Court to credibly weigh them against each other. This means that a State like Florida, which seeks to curtail existing uses through equitable apportionment, must prove by clear and convincing evidence the effectiveness of its proposed remedy. Without this proof, the Court cannot determine the extent to which an equitable apportionment decree would diminish any proven injury or compare that diminishment to the injury that would be inflicted on the defending State by restricting existing uses. If

the Court were to recognize a lower standard of proof in equitable apportionment cases, the result would be entry of incomplete or temporary relief that would require frequent re-adjustment through litigation in this Court. Or, equally concerning, it would cause more disruption to existing economies than would in fact be necessary to alleviate a complaining State's injury. Neither scenario is acceptable in light of the serious magnitude of equitable apportionment actions and the dignity of the Court's original jurisdiction.

ARGUMENT

I. The "clear and convincing evidence" requirement applies at all stages of an equitable apportionment case.

In an equitable apportionment case—as in any dispute between sovereign States—the complaining State must prove its case through "clear and convincing evidence." *Washington*, 297 U.S. at 522. The complaining State's burden is "much greater" than it would be if the suit involved a request for an injunction between private parties. *Id.* at 524; *Connecticut v. Massachusetts*, 282 U.S. 660, 669 (1931) ("The burden on Connecticut to sustain the allegations on which it seeks to prevent Massachusetts from making the proposed diversions is much greater than that generally required to be borne by one seeking an injunction in a suit between private parties."). This burden of proof is intended to be weighty, not only because it appropriately confines the Court's "extraordinary power to

control the conduct of one State at the suit of another," *Connecticut*, 282 U.S. at 669, but also because the consequences of an improperly supported equitable apportionment decree are grave. In the context of equitable apportionment, those consequences can include the disruption—or the outright destruction—of existing economies. *See Washington*, 297 U.S. at 529.

Thus, under this Court's long and unbroken practice, a complaining State must begin by establishing injury by clear and convincing evidence. But this burden does not diminish after an initial showing of injury. To the contrary, this Court has emphasized "the great and serious caution with which it is necessary to approach the inquiry whether *a case is proved*." *Colorado v. Kansas*, 320 U.S. 383, 393 (1943) (emphasis added). Consistent with that caution, this Court has required the complaining State to prove its case by clear and convincing evidence at *every stage*. *See id.* ("Before the court will intervene the case must be of serious magnitude and fully and clearly proved."); *see also id.* at 400 (dismissing Kansas' complaint for failure to meet its burden of proof); *Kansas v. Colorado*, 206 U.S. 46, 124 (1907) (finding that although Colorado's increased consumption diminished flows in the Arkansas River, Kansas failed to meet its burden of proving an injury of sufficient magnitude to justify a decree apportioning flows in the river). And the Court has applied that heavy burden of proof where—as here—a State sought to affect another State's sovereignty and disrupt existing economies by limiting water supply in a way that

might have led to increased future economic production at a different point on the river. *See, e.g.*, *Nebraska*, 325 U.S. at 621 (refusing to limit Colorado's present uses of water and finding "the established economy in Colorado's section of the river basin based on existing uses of water should be protected.").

The importance of this burden of proof is made evident by cases in which a State failed to meet it. Failure to meet the clear-and-convincing burden consistently results in partial or complete dismissal of claims. It does not result instead, as Florida appears to prefer, in partial or approximate apportionment. *See Washington*, 297 U.S. at 529 ("[T]o limit the long established use in Oregon would materially injure Oregon users without a compensating benefit to Washington users."); *Nebraska*, 325 U.S. at 621 (refusing to limit Colorado's present uses of water and concluding that "the established economy in Colorado's section of the river basin based on existing uses of water should be protected"); *Colorado v. Kansas*, 320 U.S. 383, 393 (1943) (finding that Kansas failed to meet its burden where a proposed decree apportioning the annual flow of the river would result in unquantified injury to existing agricultural interests upstream in Colorado). The Court has never entered a decree for equitable apportionment where the complaining State has failed to meet the high burden necessary to sustain one.

II. The Court cannot properly weigh the equities without clear and convincing evidence of the benefits and harms that will result from a requested remedy.

When it comes to offering a proposed remedy in an equitable apportionment case, a State must demonstrate by clear and convincing evidence the extent to which the remedy will be effective. It need not prove, as Florida puts it, that the remedy will "redress [the claimed] injury *completely*." Fla. Br. in Support of Exceptions at 28 (emphasis by Florida). But, critically, it must prove, for a proposed reduction in upstream use, what amount of water will consequently be available to diminish any established injury downstream. Only then can the Court begin to weigh the equities of curtailing existing uses upstream to address the alleged harms downstream.

Case law demonstrates the importance of the record to the Court's analysis of whether a State's proposed remedy is justified as a matter of equity. For example, in *Nebraska v. Wyoming*, the Court examined each proposed remedy individually and in the context of the evidentiary record. This led the Court to limit Colorado's *future, additional* uses of water; the Court rejected Colorado's objections to this forward-looking remedy based on the available evidence. *Nebraska*, 325 U.S. at 622 (rejecting Colorado's arguments "as we must on the evidence before us"). But the Court also refused to enjoin Colorado's *existing* uses, even though under state law Nebraska had senior rights downstream on the river. *Id.* at 621 – 22. The Court found

that, based on the record, equity required departure from traditional rules of priority appropriation because strict application of the rule "would work more hardship" on the junior user "than it would bestow benefits" on the senior user. *Id.* at 619; *see also id.* at 624 (refusing to enjoin upstream uses on small tributaries because "practical difficulties of applying restrictions which would reduce the amount of water used by the hundreds of small irrigators would seem to outweigh any slight benefit which senior appropriators might obtain"). Likewise, in *Colorado v. Kansas*, the Court held that Kansas failed to meet its burden of proof by clear and convincing evidence where the record demonstrated that "a decree [apportioning the annual flow of the river], or an amendment or enlargement of that decree in the form Kansas asks, would inflict serious damage on existing agricultural interests in Colorado[,]" but was insufficient to establish the magnitude of the injury to Colorado or the benefit to Kansas. 320 U.S. at 394. And in *Washington v. Oregon*, the Court dismissed Oregon's complaint for equitable apportionment after finding that it had failed to establish that its proposed limitation would make additional water available for its use downstream. 297 U.S. at 523 (dismissing complaint based in part on Special Master's finding that "[t]here is evidence that this quantity, small at the beginning, would be quickly absorbed and lost in the deep gravel beneath the channel"). Thus, there was no clear proof of a downstream benefit to offset the harms that would be inflicted by limiting uses upstream. *Id.* ("To limit the long established use in Oregon would materially

injure Oregon users without a compensating benefit to Washington users.").

Of course, the nature of the evidence supporting a particular remedy will vary considerably depending on the facts of each case. Relevant factors might include "physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas, [and] the damage to upstream areas as compared to the benefits of downstream areas if a limitation is imposed on the former." *Nebraska*, 325 U.S. at 618. The multitude of potentially relevant considerations only underscores the importance of the burden of proof. When considering each of these factors and balancing them against each other, the Court must be confident that its understanding of them is accurate.

Here, one set of relevant factors turns on how the federal government's "operat[ion of] five dams and three storage reservoirs on the Chattahoochee River" might affect any remedy this Court might order. Fla. Br. in Support of Exceptions at 17. It matters not that those intervening uses are reservoirs operated by a federal agency (here, the Army Corps of Engineers),[3]

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[3] Florida's Brief implies that in western States, the United States owns and has authority to apportion water among States or to determine water rights. Fla. Br. in Support of Exceptions at 17 (citing U.S. Opp. to Ga.'s Mot. to Dismiss 4 (Mar. 11, 2015)). That argument is not only unsupported by Florida's cited authority, but is contrary to the Court's many decisions affirming

instead of irrigation ditches operated by farmers. *Nebraska*, 325 U.S. at 618. Florida, the State seeking to curtail existing upstream uses, must prove by clear and convincing evidence the impact of intervening structures and their operation on the ultimate effectiveness of the remedy downstream.

This is not to say that a downstream State must prove with certainty that it will receive all of the water not consumed upstream; that will rarely be possible. Instead, it must prove its case so that the Court can reliably compare "the damage to upstream areas [. . .] to the benefits of downstream areas if a limitation is imposed on the former." *Nebraska*, 325 U.S. at 618. In some cases, this could require proving how much water would arrive downstream at agricultural headgates during the irrigation season and the effects of those flows on crop productivity. Here, it requires proving—as a result of proposed limitations—how much water would arrive in the Apalachicola Bay during dry periods and the effects of those additional flows on salinity in the Bay and oyster fishing.

Without evidence at that level of specificity, the Court simply cannot conduct the balancing inquiry it

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Congressional deference to State laws regarding the appropriation and administration of water rights. *E.g.*, *California v. United States*, 438 U.S. 645, 653 (1978) ("The history of the relationship between the Federal Government and the States in the reclamation of the arid lands of the Western States is both long and involved, but through it runs the consistent thread of purposeful and continued deference to state water law by Congress.").

is required to conduct with the requisite level of confidence that the outcome of its analysis would be correct. Simply proving that *some* additional water might arrive in the downstream State, *e.g.*, Fla. Br. in Support of Exceptions at 26, does not justify use of the Court's "extraordinary power to control the conduct of one State at the suit of another," *Connecticut*, 282 U.S. at 669. Nor does it justify disruption of an existing economy. *Washington*, 297 U.S. at 529.

If the Court were to abandon its longtime requirement that a State prove the effectiveness of its proposed remedy by clear and convincing evidence—and instead allow States like Florida to obtain equitable apportionment decrees on the theory that they are willing to "take whatever the Court is willing to give us"—the results would be ruinous in at least two ways. First, apportioning flows without clear and convincing evidence of the probable results would often either fail to redress the injury or only partially or temporarily do so. The complaining State would then be required to repeatedly return to the Court to seek additional reapportionment in order to more completely or more permanently address its alleged harms. Such piecemeal and temporary relief does not comport with the serious magnitude of equitable apportionment actions or the dignity of the Court's original jurisdiction. Second, the Court risks imposing a burden on the upstream State that is far greater than necessary to alleviate any proven downstream injury. This would unnecessarily, and inequitably, disrupt economies in the upstream

State and limit the State's sovereign authority to regulate and administer water resources over which it would otherwise retain control.

III. The Court's past decisions in a dispute between Colorado and New Mexico do not modify the burden of proof applicable to a complaining State.

In the 1980s, the Court issued two decisions in an interstate water dispute between Colorado and New Mexico. *Colorado v. New Mexico I*, 459 U.S. 176 (1982); *Colorado v. New Mexico II*, 467 U.S. 310 (1984). Florida relies on those decisions as support for its theory that "where the downstream State . . . establish[es] injury, the burden shift[s] to the upstream state." Fla. Br. in Support of Exceptions at 36 n.8. But those cases do not support Florida's novel theory—if anything, they tend to undermine it.

As an initial matter, however, those cases involved a different water law doctrine and thus, their "guiding principles" were different from those that apply to this case. Equitable apportionment must be informed by the affected States' laws governing rights to the use of waters. *See Nebraska v. Wyoming*, 325 U.S. 589, 618 (1945). That is true regardless of whether the relevant States follow the common-law doctrine of riparian rights (as here) or the law of prior appropriation (as do the States that were involved in the *Colorado v. New Mexico* cases). *See Wyoming v. Colorado*, 259 U.S. 419, 458 – 59 (1922). Under the riparian rights

system—commonly followed by Eastern, Midwestern, and Southern States—the "fundamental principle" is that "each riparian proprietor has an equal right to make a reasonable use of the waters of the stream, subject to the equal right of the other riparian proprietors likewise to make a reasonable use." *United States v. Willow River Power Co.*, 324 U.S. 499, 505 (1945). In contrast, many Western States (including Colorado and New Mexico) follow the rule of prior appropriation, whereby a water user acquires a continuing right to use water by diverting it from the stream and applying it to beneficial use. *Wyoming*, 259 U.S. at 459. As between different appropriators on the same stream, the one first in time has a superior right. *Id.* Thus, in *Colorado v. New Mexico I*, the Court reiterated that, where both States recognize the doctrine of prior appropriation, that doctrine becomes the "guiding principle" in an allocation between the States. 459 U.S. at 183 – 84. Georgia and Florida follow riparian law, and the Court should take care to heed the important distinctions between the two water law systems in applying its decisions in *Colorado v. New Mexico I* and *II* to the facts at hand.

With that important distinction in mind, the *Colorado v. New Mexico* cases in fact undermine Florida's burden-shifting theory, for two reasons.

First, the *Colorado v. New Mexico* cases involved a proposed *future* diversion, not, like here, a request to curtail *existing* diversions. Only under those circumstances did the Court require Colorado to prove that

either the benefit of its proposed diversions would outweigh the harm to existing users in New Mexico or that the harm to those users could be offset. *Colorado v. New Mexico I*, 459 U.S. at 187 n.13; *see also Colorado v. New Mexico II*, 467 U.S. at 324 (holding that Colorado failed to prove the potential benefits of its proposed diversion and that "the equities compel the continued protection of existing users of the Vermejo River's waters").

Second, in the *Colorado v. New Mexico* cases, the upstream State (Colorado) had asked the Court to determine that equity justified *departure* from the applicable principles of prior appropriation. Specifically, despite the fact that both Colorado and New Mexico follow the doctrine of prior appropriation, Colorado requested that it be allowed to develop a new use that New Mexico proved would injure its water users. *Colorado v. New Mexico I*, 459 U.S. at 178 – 79. In that context, the Court held that Colorado bore the burden to prove that its proposed diversion both justified a departure from the States' laws governing water administration and justified the proven harm that would result from the diversion. *Id.* at 187. It is not the case that Colorado bore the burden of proof simply because "the downstream State . . . had established injury." Fla. Br. in Support of Exceptions at 36 n.8. Put in terms of this case, Colorado more closely resembled Florida (the party seeking to alter the status quo) than Georgia (the party seeking to protect the status quo).

IV. An upstream State has no duty to protect or augment flows for the benefit of a downstream State in the absence of an interstate compact or equitable apportionment decree.

Florida quotes *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017, 1025 (1983) for the proposition that an upstream State has an affirmative duty to protect or even "augment" stream flows for the benefit of the downstream State. Florida's Br. in Support of Exceptions at 28 – 29 (quoting *Idaho*, 462 U.S. at 1025). This broad assertion is incorrect. In the absence of a decreed equitable apportionment or interstate compact, an upstream State has no general affirmative duty to protect flows for the benefit of a downstream State. Rather, whether and to what extent a downstream State is entitled to streamflow depends on the equitable apportionment that is ultimately effectuated. For three reasons, Florida's argument is misplaced.

First, the quoted statement from *Idaho ex rel. Evans* is dicta, not a holding. The Court did not impose a duty on any State to "conserve" or "augment" resources within its borders for the benefit of another State. Instead, it held that Idaho failed to meet its burden of proof and dismissed Idaho's request for equitable apportionment. *Idaho*, 462 U.S. at 1029 ("[W]e adopt the Special Master's recommendation and dismiss the action without prejudice to the right of Idaho to bring new proceedings whenever it shall appear that it is being deprived of its equitable share of anadromous fish.").

either the benefit of its proposed diversions would outweigh the harm to existing users in New Mexico or that the harm to those users could be offset. *Colorado v. New Mexico I*, 459 U.S. at 187 n.13; *see also Colorado v. New Mexico II*, 467 U.S. at 324 (holding that Colorado failed to prove the potential benefits of its proposed diversion and that "the equities compel the continued protection of existing users of the Vermejo River's waters").

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Second, neither of the two cases that the *Idaho ex rel. Evans* Court cited in support of its dicta—*Wyoming v. Colorado*, 259 U.S. 419 (1922) and *Colorado v. New Mexico I*—stands for the proposition that an upstream State has an affirmative duty to protect or augment stream flows for the benefit of the downstream State. *See Idaho ex rel. Evans*, 462 U.S. at 1025.

In *Wyoming v. Colorado*, the Court's holding was quite the contrary; it held that downstream water rights in Wyoming and Nebraska had to yield to the countervailing equities of an established economy upstream in Colorado. 259 U.S. at 485 – 86. Rather than requiring Colorado to augment the flow of the Laramie River, the Court instead allowed Colorado to *divert* the remaining dependable supply of the river. *Id.* And while the Court considered the effects of conservation on the dependable flow, it did so in the context of conservation efforts by both States, not just the upstream State. 259 U.S. at 484; *see also Colorado v. New Mexico I*, 459 U.S. at 185 ("[W]e placed on *each* State the duty to employ 'financially and physically feasible' measures 'adapted to conserving and equalizing the natural flow.'" (emphasis added) (quoting *Wyoming v. Colorado*, 259 U.S. 419, 484 (1922))). As the Court made clear, "[t]he question . . . is not what one State should do for the other, but how each should exercise her relative rights in the waters of this interstate stream." *Wyoming v. Colorado*, 259 U.S. at 484.

Likewise, in *Colorado v. New Mexico I* the Court did not impose a duty on the upstream State (Colorado) to conserve or augment stream flows for the

benefit of the downstream State (New Mexico). Instead, in evaluating the harms and benefits to each affected State, the Court considered whether conservation efforts by the *downstream* State might offset injury *in that State*. 459 U.S. at 186. As to the upstream State, the Court asked only whether it had undertaken "reasonable steps" to minimize the amount of diversion that would be required. *Id.* In no event do the decisions in *Wyoming v. Colorado* or *Colorado v. New Mexico I* support the broad proposition that Florida now advances.

Third, if Florida's argument were adopted, it would inappropriately elevate one State's sovereign rights above another's. By arguing that an upstream State has an affirmative duty to conserve and augment stream flows for the benefit of the downstream State, Florida asks the Court to prioritize a downstream State's sovereign right to apportion water within its borders over the upstream State's sovereign rights to use water within its borders. That would be contrary to the Court's long history of equitable apportionment, which has cautiously sought the delicate adjustment of interests only upon the clearest showing of injury and the right to relief. *See Nebraska v. Wyoming*, 325 U.S. at 618; *see also Washington v. Oregon*, 297 U.S. at 524; *Connecticut v. Massachusetts*, 282 U.S. at 670.

CONCLUSION

Only after a complaining State has clearly proven the effectiveness of its proposed remedy can the Court

begin to weigh the equities involved with apportionment. If the Court is uncertain to what extent the remedy will diminish the alleged injury, then the Court cannot properly balance the diminishment of injury against the harm that will result to the upstream State from reducing its consumption. In recognition of the seriousness of the exercise of this Court's original jurisdiction, the Court should continue to enforce the requirement that a complaining State prove its entire case by clear and convincing evidence.

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RECORD AND BRIEFS

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STATE OF FLORIDA,
Plaintiff,
v.
STATE OF GEORGIA,
Defendant.

ON EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER

EXCEPTIONS TO REPORT OF THE SPECIAL MASTER BY PLAINTIFF STATE OF FLORIDA AND BRIEF IN SUPPORT OF EXCEPTIONS

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EXCEPTIONS TO REPORT OF THE SPECIAL MASTER

Plaintiff State of Florida respectfully submits the following exceptions to the Report of the Special Master issued on February 14, 2017:

1. Florida takes exception to, and this Court should decline to adopt, the Special Master's report and recommendation to deny Florida's request for relief.

2. Florida also takes exception to, and this Court should decline to adopt, the components of the Special Master's report and recommendation, including:

a. The Special Master's heightened standard for establishing redressability;

b. The Special Master's conclusion that, even after establishing injury, Florida bore the burden of proving redressability by clear and convincing evidence;

c. The Special Master's conclusion that the U.S. Army Corps of Engineers' discretion in operating its facilities precludes a finding of redressability;

d. The Special Master's failure to account for the ways in which Florida's injuries would be redressed, no matter how the Corps exercises its discretion;

e. The Special Master's failure to account for principles of equity and the constitutional role of this Court in resolving disputes among the States; and

f. The other flaws discussed in the accompanying brief, which addresses these exceptions (and related errors) more fully.

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INTRODUCTION

This original action represents the State of Florida's last remaining, legal remedy to save the Apalachicola Region—one of the nation's most unique, diverse, and irreplaceable environmental resources—from devastation as a result of the State of Georgia's ever increasing consumption of the waters on which the Apalachicola ultimately depends for its life.

After a five-week trial, the Special Master had no difficulty concluding that Georgia's "upstream water use" has been and continues to be "unreasonable," and that the Apalachicola Region has sustained "real harm" as a result of the decreased flow of water into Florida. Report of the Special Master (Report) 30-31 (Feb. 14, 2017), Dkt. No. 636. Underscoring the inequitable nature of Georgia's conduct, the Special Master also found that "Georgia's position—practically, politically, and legally—can be summarized as follows: Georgia's agricultural water use should be subject to no limitations, regardless of the long-term consequences for the Basin." *Id.* at 34. Yet, the Special Master concluded that this Court should deny Florida's request for relief because there is "no guarantee" that the U.S. Army Corps of Engineers (Corps)—which is not a party to this proceeding—would refrain from acting to *offset* the benefits of such a decree. *Id.* at 69.

The Special Master framed that ruling in terms of "redressability," and premised his entire report and recommendation on that "single, discrete issue." *Id.* at 30. The Special Master was mistaken, as a matter of law, in believing that this action should be short-circuited on that basis. Whether viewed from the standpoint of this Court's equitable apportionment cases or Article III redressability cases, the possibility

that the Corps might respond to a decree by seeking to counteract its benefits for Florida provides no basis for dismissing this case. As this Court explained in *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017, 1026 (1983) (*Idaho II*), "[u]ncertainties about the future . . . do not provide a basis for declining to fashion a decree." The Special Master was mistaken in believing that Florida was required to establish redressability to a certainty.

Ample evidence, including the Corps' past practice, indicates that the Corps is likely to exercise its discretion in a manner that effectuates, rather than offsets, the benefits of a decree entered by this Court. And the Corps' most recent, and direct, statement on the matter eliminates any doubt. In approving its new water control manual, the Corps stated: "Should the Supreme Court issue a decree apportioning the waters of the [Apalachicola-Chattahoochee-Flint River] Basin . . . [the Corps] would . . . adjust its operations accordingly." Record of Decision adopting Proposed Action Alternative for Implementation of Updated Apalachicola-Chattahoochee-Flint River Basin Master Manual 18 (Mar. 30, 2017) (Record of Decision).[1] Moreover, no matter how the Corps exercises its discretion in particular conditions, adding more water to the system—by reducing Georgia's consumption—can only alleviate the increasing strains on the Apalachicola and provide meaningful redress.

Never before has this Court found both injury and inequitable conduct (as the Special Master did here),

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[1] This document is available at http://www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/docs/ACF%20ROD%20Signed%2030%20March%2017.pdf?ver=2017-03-30-142329-577.

and yet held that the Court is powerless to do anything about it. Such a ruling would flout the principles of equity that guide equitable apportionment actions by allowing an acknowledged wrong to go unremedied. Moreover, it would upset the constitutional role of this Court in resolving disputes among the States—a vital mechanism on which all States rely, since they surrendered the traditional rights of sovereigns to protect their own citizens and lands from threats beyond their borders when they entered the Union.

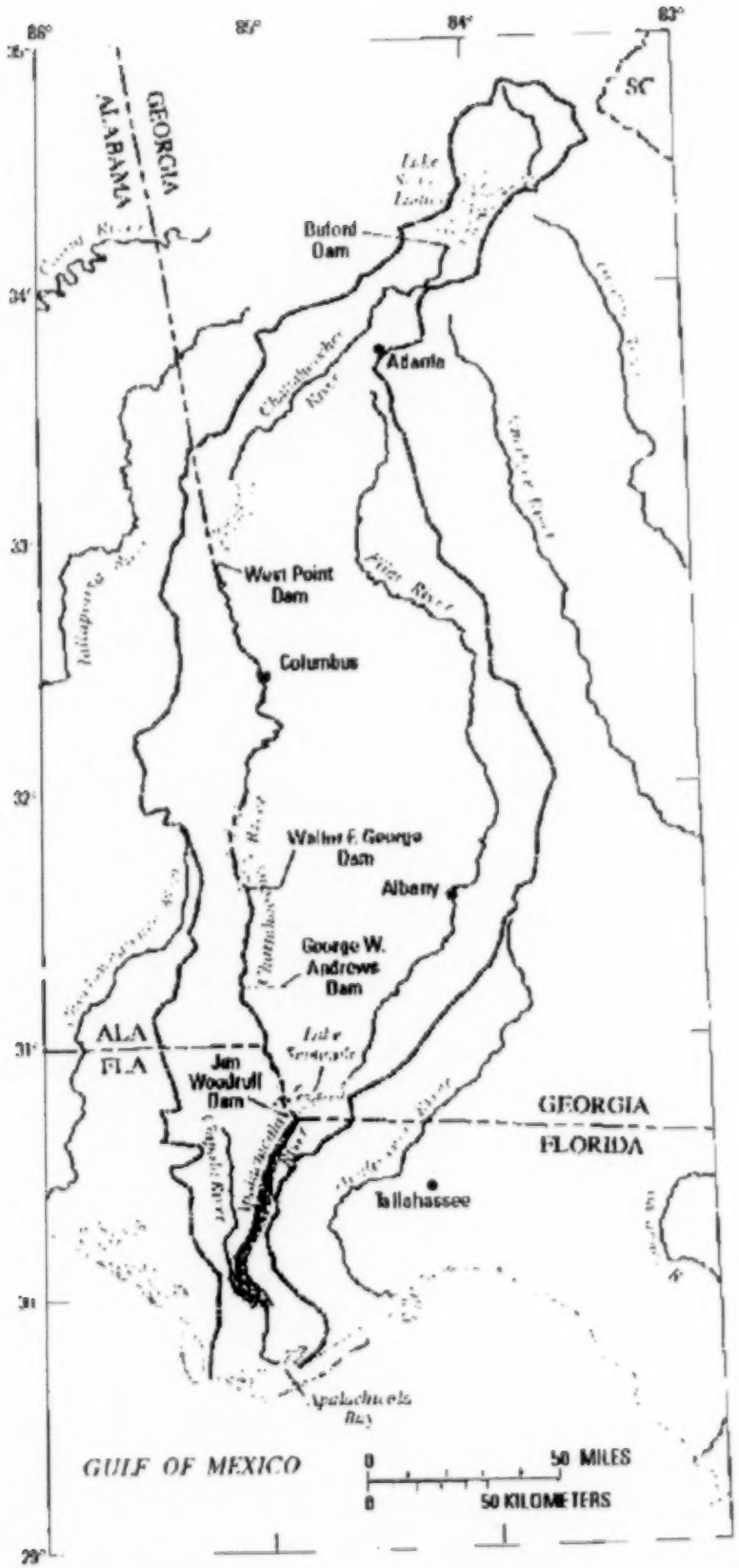
The Court should correct the legal error on which the Special Master's recommendation is based and return the case to him for further proceedings.

STATEMENT OF THE CASE

At the heart of this case is the Apalachicola Region in northwestern Florida, an area renowned for its natural beauty, diverse ecosystems, and distinct way of life. The health of this Region depends on the flow of water into it. For most of recorded history, that has not been a problem, even with the natural droughts that the region has periodically faced. But since the 1970s, Georgia's upstream consumption of the waters that flow into the Apalachicola has grown drastically. This has had the predictable effect: It is effectively strangling the Apalachicola Region and killing or threatening its animal and plant life. For decades, Florida has done everything it could to avert that result—and Georgia has fought it at every turn. This litigation represents Florida's last opportunity to stem Georgia's inequitable consumption, and protect these irreplaceable natural resources, by apportioning the waters equitably between the States.

A. The Apalachicola

The Apalachicola-Chattahoochee-Flint River Basin (ACF Basin or Basin) drains waterfall from northern and western Georgia, southeastern Alabama, and northern Florida, through three rivers. Report 4-5. The longest of those rivers is the Chattahoochee, which rises in northern Georgia and flows more than 430 miles south and west, forms part of the border between Georgia and Alabama, and ultimately terminates at Lake Seminole on the border of Georgia and Florida. *Id.* at 4. Joining it at Lake Seminole is the Flint River, which rises near Atlanta. *Id.* at 5. Those two rivers in turn form the Apalachicola River, which begins at Lake Seminole on the northern Florida border and wends its way for 106 miles through the Florida panhandle before emptying into the Apalachicola Bay. *See id.* The following map, included in Exhibit B to the Special Master's report, shows the ACF Basin and its three main waterways:


86°
85°
84°
83°
35°
34°
33°
32°
31°
30°
29°
GEORGIA
ALABAMA
SC
Buford Dam
Atlanta
West Point Dam
Columbus
Walter F. George Dam
Albany
George W. Andrews Dam
ALA
FLA
Jim Woodruff Dam
GEORGIA
FLORIDA
Tallahassee
GULF OF MEXICO
0 50 MILES
0 50 KILOMETERS

As anyone who has visited the area knows, the Apalachicola Region in Florida is not only one of the nation's true environmental treasures, but supports a distinct way of life, with families that have for centuries fished the waters and lived off its bounty. *See* Jim McClellan, *Life Along the Apalachicola River* 7-8 (2014). The Apalachicola River and Bay support distinct ecosystems that the Special Master recognized as among the most unique, diverse, and rich in animal and plant life in all of North America. Report 7-8. The Apalachicola River and its associated floodplain—which can spread out several miles from the river on either side—contains a network of smaller tributaries, swamps, and "sloughs," which are natural channels connected to and fed (in ordinary conditions) by the river. *Id.* This area is "home to the highest species density of amphibians and reptiles in all of North America, and supports hundreds of endangered or threatened animal and plant species." *Id.* at 8.

For example, the U.S. Fish & Wildlife Service has declared the River a "critical habitat . . . essential for . . . conservation" of the Gulf sturgeon, a threatened species. *Id.*; Allan Pre-Filed Direct Testimony (PFD) ¶¶ 52-54 (Nov. 4, 2016), Dkt. No. 534. The River also supports 26 species of freshwater mussels, including three endangered or threatened species. Report 8; Allan PFD ¶ 13. The freshwater fish assemblage of the Apalachicola River and its floodplain is one of the most diverse in Florida, with 142 freshwater and estuarine fish species, making it a haven for fishing. Allan PFD ¶ 12. The area also supports an extraordinary array of plant life, including the largest stand of Tupelo trees in the world, making this one of the few places where

Tupelo honey is produced commercially. Scyphers PFD ¶ 19 (Nov. 4, 2016), Dkt. No. 551.

The Apalachicola River, in turn, feeds the Apalachicola Bay, a related but distinct ecosystem. In the Bay, where the River delivers its waters and essential nutrients into the Gulf of Mexico, the mixture of nutrients, fresh water, and salt water forms "one of the most productive estuaries in the northern hemisphere." Report 8-9. Historically, the Bay has offered "an 'ideal' place for oysters to thrive, ... producing ninety percent of Florida's oyster harvest and ten percent of the nation's oyster harvest." *Id.* at 9. The Bay is also "a major fishery resource for ... shrimp[] and finfish," and the harvesting of oysters, shrimp, crab, and fish in the Bay "is the primary economy in the Apalachicola Region." *Id.* at 8, 10. Like the relationship between fishing or lobstering and seaside towns throughout New England, the Bay's resources, especially its oysters, have fostered "a distinctive culture" in Apalachicola. *Id.* at 9-10.

Working closely with the federal government and others, Florida has long acted to protect and preserve the Apalachicola Region's precious resources and ecology. In 1979, for example, Florida and the National Oceanic and Atmospheric Administration (NOAA) established the Apalachicola Estuarine Sanctuary to ensure "the long term preservation of the [Apalachicola's] natural ecosystem for baseline research and educational purposes." Steverson PFD ¶¶ 24-25 (Nov. 4, 2016), Dkt. No. 553; *see* Report 10. Since 1965, Florida has also spent hundreds of millions of dollars to conserve 342,489 acres in the Basin by purchasing land or acquiring conservation easements,

and undertaken extensive efforts to manage and protect these areas. *See* Steverson PFD ¶ 16; FX-144.[2]

B. The Decimating Effects Of Georgia's Increased Consumption Of Water

While the State of Florida has long sought to protect the Apalachicola Region from threats within its control, this case concerns a threat *outside* of Florida's control, because it stems from conduct outside of Florida—Georgia's exploding consumption of the water on which the Apalachicola ultimately depends for its sustenance. As the following graph illustrates, Georgia has drastically increased its consumptive use of water in the ACF Basin since the 1970s:

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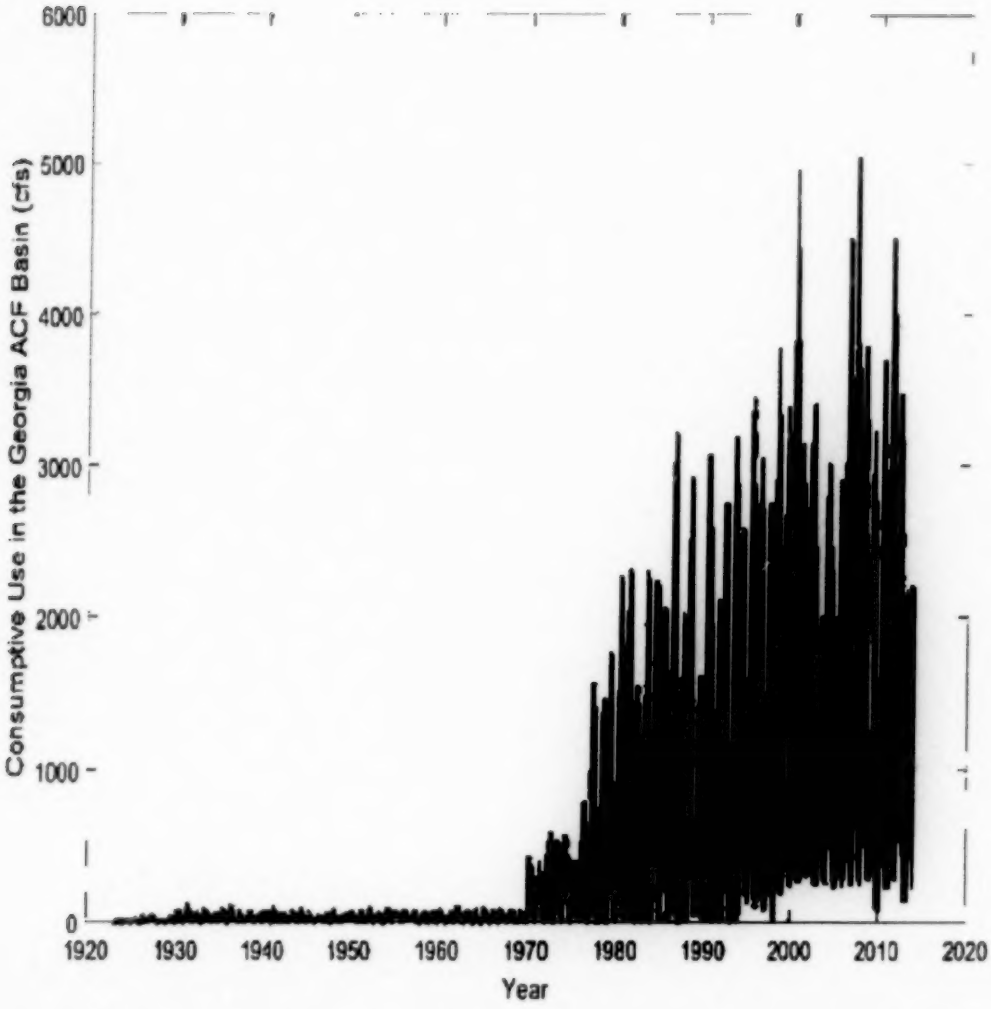
[2] A video displaying the vast beauty of the Apalachicola Region, which was introduced into evidence, is available at https://www.facebook.com/ApalachicolaNationalEstuarineResearchReserve/videos/690678477752160/.



Hornberger PFD at 37, Fig. 7 (Nov. 4, 2016), Dkt. No. 546.

A driving cause of this trend has been "[a]gricultural irrigation," especially in the Flint River Basin, which, as the Special Master found, has "increased dramatically . . . since 1970." Report 32; *see* Hornberger PFD ¶¶ 77, 79, Fig. 8. Indeed, Georgia's irrigated acreage in the ACF Basin has increased more than ten-fold since 1970, growing from 75,000 acres to more than 825,000 acres in 2014. Report 33. Even "Georgia's own estimates show a dramatic growth in consumptive water use for agricultural purposes." *Id.*

Because there is only so much water available, increased consumption in Georgia means less water for Florida. And this has had the predictable result. Over the period of this explosion, U.S. Geological Survey data "show that the magnitude, frequency, and duration of low flows entering Florida from Georgia" have become much more severe. Hornberger PFD ¶ 44. The graph below, from Georgia's own expert, shows the increasing frequency of severe low flows:

Source: "Bedient Demo. 52-53.xlsx" Workbook, "ChattaQ&H" Worksheet

FX-D-17.

From 1930 to 1970, the Geological Survey recorded only six months—total—in which average flow on the Apalachicola near the Georgia border was below 6,000 cubic feet per second (cfs). But following the massive expansion of Georgia's irrigation and consumption over the past four decades, in 2011 and 2012 alone average monthly streamflow at the same location was below 6,000 cfs for *fourteen* months. *See* FX-D-1; Hornberger PFD ¶ 46.

While low flows have been most severe during meteorological droughts, even average rainfall years (what the Special Master called "'normal' periods," Report 65) have produced much lower flows over recent decades than they did historically. For example,

the evidence at trial showed that, while the amount of rainfall has not changed significantly since the 1970s, streamflow has declined by thousands of cfs. *See* Lettenmaier PFD ¶¶ 37-38, Figs. 9, 10 (Nov. 4, 2016), Dkt. No. 550; *see also* Hornberger PFD ¶¶ 63-64, Table 4 (documenting decline in basin yield since the 1970s).

Just as one would expect, the increasingly frequent and extended periods of low flows (even in "normal," or non-drought, years), and the overall reduction in the amount of water reaching the Apalachicola River and Bay, have profoundly impacted the ecology of these precious ecosystems. Remarkably, Georgia has repeatedly denied any harm whatsoever, and it no doubt will again in this Court. But the Special Master found that there is "little question" that Florida has experienced "devastating" harm from these "decreased flows in the River." Report 31. Most notably, restricting the flow of fresh water into the Bay has reduced the supply of nutrients that are essential for Bay organisms and altered the salinity of the Bay, significantly impacting "oyster production." *Id.* at 32.

The problem reached a crisis point in 2012, when (as the Special Master found) "high salinity in the Bay from reduced streamflow" led to an oyster collapse so severe that the federal government (through NOAA) issued a fishery disaster determination. *Id.*; *see* FX-413, NOAA Final Decision Memorandum, at NOAA-0022896-97. The high salinities had allowed oyster predators like conchs to thrive in unprecedented numbers. *Id.* at NOAA-0022897. As one official put it, it was "almost like a science fiction movie how many conchs there were out there." Tr. vol. 17, at 4336:6-

4337:3 (Lipcius) (quoting Berrigan Dep. 161:13-162:1).[3] Conchs "passed across entire reefs, devouring every oyster and then moving on to the next reef." Berrigan PFD ¶ 44 (Nov. 4, 2016), Dkt. No. 536; *see* Tr. vol. 17, at 4336:6-4337:3 (Lipcius). As the Special Master found, the decimation of the oyster beds has, in turn, "greatly harmed the oystermen of the Apalachicola Region, threatening their long-term sustainability." Report 32.

Even now, five years on from this disaster, the Bay has yet to recover, because the reduction in flow in average rainfall years (compared to historical baselines) due to Georgia consumption has prevented salinity in the Bay from returning to its natural levels. *See* Kimbro PFD ¶ 107 (Nov. 4, 2016), Dkt. No. 547 (the oyster fishery will not be restored while there are low flows and the resulting high salinity and proliferation of oyster disease, predators, and recruitment failure); Tr. vol. 6, at 1488:13-19 (Sutton); Berrigan PFD ¶¶ 62-63; Ward PFD ¶¶ 31-41 (Nov. 4, 2016), Dkt. No. 557; Sutton PFD ¶¶ 65-67 (Nov. 4, 2016), Dkt. No. 556.

The Apalachicola River, too, has suffered from the unconstrained growth of upstream consumption in Georgia. While low flows into the Bay impact the level of salinity in the water, low flows in the River impact whether there is water *at all* in crucial areas around the River. A 1999 guidance document issued by the Environmental Protection Agency (EPA) and the U.S. Fish and Wildlife Service noted that "[e]xtreme low-flows are likely among the most stressful natural events faced by river biota"—that is, animal and plant

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3 "Tr. vol. __ (witness)" refers to October 31-December 1, 2016 Trial Transcripts volumes 1-17 therein, available at http://www.pierceatwood.com/florida-v-georgia-no-142-original.

life (and all living organisms)—on the Apalachicola. Instream Flow Guidelines, FX-599, at FL-ACF-02545883. The agencies explained that, "[a]s flow level decreases, available habitat constricts and portions of the channel become dry. Aquatic animals that are unable to move to remaining pools or burrow into the moisture of the stream bed itself perish." *Id.*

As flows decline, hundreds of sloughs—the narrow channels through which water reaches much of the floodplain—become disconnected from the River. *See* U.S. Geological Survey Technical Paper 1594, GX-7, at Appendix II (listing connection ranges for streams and sloughs of the Apalachicola River). When sloughs are disconnected from the River for an extended period, they "turn into puddles and ponds." Hoehn PFD ¶ 44 (Nov. 4, 2016), Dkt. No. 544. When that occurs, dissolved oxygen in the stagnant water "drops to levels that are lethal for many fish and mussels within a matter of days." *Id.* And in extended low flow periods, sloughs can dry up entirely, "killing all aquatic animals trapped in the slough." *Id.*[4]

The more frequent and prolonged low flow periods also have seriously harmed mussels that inhabit the area, including endangered and threatened species, stranding and killing them. Allan PFD ¶ 21; Tr. vol. 2, at 278:25-280:16 (Hoehn). Plant species that have long thrived in the Apalachicola likewise have suffered. For example, swamp trees like the iconic Tupelo have experienced stunted growth and are gradually dying off and being replaced by species typically found in

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[4] Photographs displaying the stark drop in water in the sloughs during low flow periods are reproduced in the testimony of Florida witness Theodore Hoehn. *See* Hoehn PFD at 31.

dryer conditions. *See* Menzie PFD ¶ 155 (Nov. 4, 2016), Dkt. No. 569; Tr. vol. 2, at 278:25-280:16 (Hoehn).

C. Georgia's Recognition Of The Problem And Refusal To Do Anything About It

In this litigation, Georgia has repeatedly denied the devastating ecological effects that its consumption has had on the Apalachicola River and Bay. But, in fact, Georgia has long known about the threat its increased consumption has posed to the region.

As early as 1992, Georgia admitted to the federal government that "Georgia has [an] area of potential groundwater overdraft . . . in the southwestern corner of the state where there have been large withdrawals made in the last two decades for the irrigation of crops"—*i.e.*, along the Flint River. FX-1 at GA00811963. Three years later, a U.S. Geological Survey report warned that "stream-aquifer-flow declines upstream of the Apalachicola River will reduce flows entering Lake Seminole and, subsequently, cause reductions in flow of the Apalachicola River." JX-7 at 68. At the same time, Georgia's Department of Natural resources was itself raising the red flag, warning that Georgia's methodology for ensuring adequate flows in its rivers was not "scientifically defensible" and could lead to "significant degradation of stream communities." FX-36 at GA00100747.

By 1999, Georgia's Chief of Fisheries concluded that there was "clear evidence that groundwater is over-allocated in the lower Flint River basin." FX-6 at FL-ACF-0254447. The Director of its Environmental Protection Division, Harold Reheis, likewise admitted that, "[w]hen thousands of irrigation systems are operating during dry weather, such as we have been

having this year [1999], one can see a significant reduction in Flint River flows." FX-2 at GA02257045.

Nor was Georgia under any illusions about the cause of that predicament. In internal correspondence revealed through discovery, Reheis explained that the laws requiring farmers to obtain irrigation permits "are the weakest of all Georgia's environmental laws." *Id.* at GA02257044. That weakness was nevertheless unavoidable, he wrote, because "the General Assembly would not accept more than that in regulating farmers." *Id.* The permitting authorities operating under Reheis then loosened the law even further through an approach that—as Reheis himself admitted—"essentially just issued permits for any farmer that requested them." FX-3 at GA02257040. This system had "worked well for the farmers," Reheis explained—but it had not "worked very well for the water resources." FX-2 at GA02257045.

At trial, Florida introduced documents showing Georgia's own recognition in the late 1990s that "we've already exceeded the 'safe' upper limit of permittable acreage in the lower Flint," and that "[o]ver-use will cause severe impacts on fish and other aquatic life in the Flint River and its tributaries." FX-4 at GA01419036-37 (italics and bold omitted). Georgia also appreciated how its over-consumption could harm it in litigation down the road. "If new irrigation uses are not limited effectively and soon," one Georgia official prophetically observed in 1999, "it will create a bigger Achilles' heel than we currently have" on the day when litigation over an equitable allocation of waters among the States ultimately arrived. *Id.* at GA01419039.

In fact, Georgia was concerned enough about the prospect of such litigation that it imposed a purported

moratorium on new irrigation permits and passed legislation—the Flint River Drought Protection Act—providing for "irrigation auctions" in the Flint River Basin whenever a severe drought was predicted, essentially paying farmers to consume less water. *See* Legislative Summary of Flint River Drought Protection Act, FX-10, at 30-31 (legislative history explaining that the Act was passed, "in large part," to stave off "litigation between Georgia, Florida, and Alabama over water rights in the region").

But the political will to actually follow through on those measures soon ran dry. The State invoked the Drought Protection Act only twice, in 2001 and 2002, after which the State cut off funding for irrigation auctions. *See* Tr. vol. 3, at 685:4-7 (Reheis). In 2007 and 2008, during severe drought conditions, Georgia failed to implement the Act's auction procedures at all, prompting criticism from the U.S. Fish and Wildlife Service. FX-47 at GA00537496-98. When worse drought conditions threatened in 2011, Georgia again declined to invoke the Act, "not wishing to incur the cost of preventative action." Report 33. And in 2012, with another drought looming, Georgia "conveniently took the position that implementing the [Act] would be 'too little, too late'—despite lacking scientific support for that conclusion." *Id.* at 34.

Instead of conservation, Georgia has just doubled down on consumption. In 2006, Georgia lifted the moratorium on new irrigation permits, and since then the State has issued nearly 1,400 permits covering more than 160,000 acres of newly irrigated farmland—a 17 percent increase in just a decade. FX-D-16 (data compiled from JX-132). Those permits contain no limitations on the amount of water farmers can use for

their irrigation, leaving Georgia farmers with no economic incentive whatsoever to invest in more efficient irrigation systems. *See* Report 33.

In the face of this abysmal record, the Special Master found "that Georgia's upstream agricultural use has been—and continues to be—largely unrestrained"; Georgia's conservation efforts have been "exceedingly modest"; and what few measures Georgia has implemented have "proven remarkably ineffective." *Id.* at 32-33. None of this comes as a surprise. As the Special Master put it, "Georgia's position—practically, politically, and legally—can be summarized as follows: Georgia's agricultural water use should be subject to no limitations, regardless of the long-term consequences for the Basin." *Id.* at 34.

D. The U.S. Army Corps Of Engineers' Operations On The Chattahoochee

While recognizing the devastating impact of Georgia's insatiable consumption of water, the Special Master focused much of his analysis on the role of a different actor—the Army Corps of Engineers.

Unlike the situation in many western States, "[t]he United States does not own the water in the ACF Basin and the Corps has no authority to apportion water among States or determine water rights." U.S. Opp. to Ga.'s Mot. to Dismiss 4 (Mar. 11, 2015), Dkt. No. 66; *see* U.S. Invitation Br. 19 (Sept. 18, 2014) (same). The Corps does, however, operate five dams and three storage reservoirs on the Chattahoochee River, shown on the map above (*supra* at 5). *See* Report 6, App. C (map). The largest storage facility is Lake Lanier, which sits above Atlanta and thus is the only reservoir

from which the Corps can provide municipal water supply to the Atlanta metropolitan area. Report 6.

In contrast to the Chattahoochee, the Flint River—along which much of the consumption at issue occurs—is unimpeded by any Corps storage reservoirs or dams. *Id.* The Flint flows into Lake Seminole, after which the waters flow through Jim Woodruff Dam and into Florida via the Apalachicola River. *Id.* As the Special Master found, the Jim Woodruff Dam is a "run-of-river" project, meaning that it lacks any "appreciable storage" capacity. *Id.* Thus, the dam "simply pass[es] flows downstream without impounding the water for any appreciable length of time." *Id.* at 37. There is no place, and no way, for the Corps to store water from the Flint before it flows into Florida.

The Corps operates these facilities in accordance with specific "project purposes" designated by Congress, including conservation of fish and wildlife, flood control, water supply, hydropower, navigation, and recreation. *Id.* at 6-7, 38. To help it achieve those objectives, the Corps has developed a set of protocols to guide its decisions about when to store or release water. *Id.* at 38. As a general matter, those guidelines are based on the amount of water entering the Corps' system of facilities ("basin inflow"); the amount of water available in its reservoirs ("conservation storage"); and the time of the year (which correlates with dry and wet periods). *Id.* at 42. As basin inflow increases, storage levels in the Corps' reservoirs generally increase too, making it easier to meet the demands on the system as a whole. *Infra* at 46-49.

The Corps' guidelines set certain minimum flow rates for Jim Woodruff Dam based on these factors, in recognition of the harms to fish and wildlife from

reduced flows. Report 43. The minimum flow rate at Jim Woodruff Dam during drought operations, which are triggered by low conservation storage levels in the reservoirs, is 5,000 cfs (or, when storage drops even lower, 4,500 cfs). *Id.* at 44. That 5,000 cfs minimum flow rate also applies if basin inflow falls below 5,000 cfs during *non*-drought operations, meaning that in those times the Corps must supplement basin inflow with releases from its reservoirs. *See id.* at 43. And when storage levels and basin inflows are higher, the minimum flow rates are higher as well. *Id.*

The Corps must ensure that at least those designated amounts of water get to Florida. But, as the Special Master found, the Corps has discretion "to release *more* than the required . . . minimum" during drought or other periods. *Id.* at 53-54 (emphasis added); *see also id.* at 61. And, in fact, the Corps has "historically exercised its discretion" to do just that—*i.e.*, release more water, when it is available, than is called for by its minimum flow rate. *See id.* at 55.

Nevertheless, the Special Master concluded that "[t]here is *no guarantee* that the Corps will exercise its discretion to release or hold back water at any particular time." *Id.* at 69 (emphasis added). Thus, "[w]hile the evidence presented at trial shows that the Corps retains discretion in its operations, how the Corps will exercise that discretion *remains unknown.*" *Id.* at 53 (emphasis added). As discussed below, that "unknown" became the lynchpin for the Special Master's recommendation. *See id.* at 69. What is undeniable, however, is that water consumed by Georgia will never reach Florida. And more water flowing into the system can only result in more water flowing out of the system—and into Florida.

E. Previous Efforts To Stem Georgia's Increasing Water Consumption

As the Special Master observed, this action is hardly the first attempt to stem the harm caused by Georgia's exploding consumption of water. Report 1. How Florida ended up in this Court provides an important backdrop to its claims here.

By the early 1990s, the ill effects of the spike in Georgia's consumption were evident to all concerned. In 1990, Alabama sued in federal district court to stop Georgia's plan to begin municipal water withdrawals from the Lake Lanier reservoir. In response, Georgia agreed with Alabama, Florida, and the Corps to a study that could facilitate an agreed-upon allocation of waters in the ACF Basin. *See* Report 10-11; Pub. L. No. 105-104, 111 Stat. 2219 (1997); *see also* FX-205 at GA00128576 (statement by then-Georgia Governor, Zell Miller, about study).

In 1997, Florida, Georgia, Alabama, and the federal government agreed to enter into a compact establishing a process by which the States could negotiate an equitable apportionment of the Basin's waters. Report 11; *see also* Pub. L. No. 105-104, § 1, 111 Stat. at 2222-24. In ratifying that compact, Congress noted its intent (shared with the party States) that "all state and federal officials ... administering other state and federal laws affecting the ACF Basin *shall, to the maximum extent practicable,* ... administer those laws in furtherance of the purposes of this Compact and the allocation formula adopted by the Commission." Pub. L. No. 105-104, § 1, 111 Stat. at 2225 (emphasis added).

Six years later, negotiations collapsed. Georgia refused to accept any outside limit on its

consumption—the whole point of the compact. *See, e.g.*, Tr. vol. 13, at 3423:16-3424:8 (Kirkpatrick) (testifying that Atlanta would never accept any mandatory or "artificial" limits on its water use). Indeed, once Florida and Alabama agreed to the compact arrangement, Georgia just insisted on higher levels of consumption—which it knew could "scuttle[]" any deal. FX-206 at GA02322676. Meantime, Georgia tried to strike a side deal with the Corps in which the Corps would effectively allocate water to Georgia without Florida's (or Alabama's) involvement—an obvious act of "bad faith." *Alabama v. U.S. Army Corps of Eng'rs*, 357 F. Supp. 2d 1313, 1318 (N.D. Ala. 2005), *vacated and remanded on other grounds*, 424 F.3d 1117 (11th Cir. 2005); *see also* Struhs PFD ¶¶ 27-33, 38-44 (Nov. 4, 2016), Dkt. No. 554 (discussing Georgia's bad faith approach to the negotiations).

In 2009, on the heels of another Alabama suit seeking to restrict Georgia's intake from Lake Lanier, Georgia suggested that it was willing to again consider limits on its consumption. It commissioned a new study of how to minimize its consumption and create additional sources of supply, *see* Water Contingency Planning Task Force: 2009 Findings & Recommendations, JX-41, and passed a "Water Stewardship Act" in an effort "to influence the ongoing negotiations with Florida and Alabama, Congress, and the court hearing Georgia's appeal of the recent district court's decision." FX-905 at 204 (footnote omitted). But as soon as that court order was reversed by the U.S. Court of Appeals for the Eleventh Circuit in 2011, Georgia abandoned all but the flimsiest of these conservation mechanisms. *See* Tr. vol. 13, at 3396:15-3397:4, 3397:9-3398:10 (Kirkpatrick).

Throughout this period, Georgia's answer has always been to point to some other door as a way of resolving the crisis. When Alabama sued in 1990, Georgia suggested the States negotiate an agreed upon allocation. When Congress approved a compact to facilitate such negotiations, Georgia refused to put a meaningful offer on the table and, instead, tried to strike a side deal with the Corps. And when Georgia found itself back in district court after those negotiations collapsed, it argued that only this Court could resolve a "water allocation" dispute between the States.[5] And so to this Court Florida came.

F. This Original Action

In 2013, Florida filed this original action seeking an equitable apportionment of the waters and a cap on Georgia's consumption. Amazingly, Georgia responded by arguing that *this* Court was not an appropriate forum either, and that Florida had not even *alleged* an adequate injury. Ga. Opp. 16-32 (Jan. 31, 2014). This Court disagreed and appointed Ralph I. Lancaster, Jr., as Special Master to oversee the case. Report 16.

Georgia then moved to dismiss the case on the ground that the United States was a necessary party that could not be joined due to sovereign immunity. *Id.* at 17. The United States, as *amicus curiae*, opposed Georgia's motion alongside Florida. And, after hearing argument, the Special Master denied the motion,

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[5] *See Alabama v. U.S. Army Corps. of Eng'rs*, 382 F. Supp. 2d 1301, 1309 (N.D. Ala. 2005); Ga. Response Br., *Georgia v. Southeastern Fed. Power Customers, Inc.*, No. 02-10135D, 2002 WL 32641401, at *9 (U.S. filed Feb. 8, 2002); Ga. Opp., *Alabama v. U.S. Army Corps of Eng'rs*, No. 05-1138, 2006 WL 1287606, at *20 (U.S. filed May 8, 2006).

concluding that *all* the equitable factors set out in Federal Rule of Civil Procedure 19(b) supported allowing this action to proceed. *See* Order on Ga.'s Mot. to Dismiss 11-22 (June 19, 2015), Dkt. No. 128. As he explained, because Florida sought only a cap on Georgia's consumption, there was little risk of prejudice to the United States or Georgia if the United States were not a party. *Id.* at 19-20. He further found that Georgia had failed to prove that such a cap "would be ineffective absent a decree binding on the Corps." *Id.* at 13. And he concluded that, if this action were dismissed, "Florida would have no other adequate remedy," *id.* at 21—a gross "inequity," *id.* at 22.

Following extensive discovery, the case proceeded to a five-week trial beginning on October 31, 2016. The United States did not participate in the trial and declined to submit a pretrial brief. Near the end of the trial, however, the Special Master, *sua sponte*, asked the United States to submit "a post-trial amicus brief," "two weeks after the close of trial," "addressing specifically the issue of the Army Corps of Engineers' operations in the ACF River Basin." Nov. 22, 2016 Email from J. Dunlap to M. Gray (Dec. 14, 2016), Dkt. No. 577. In that brief, the United States opined on the Corps' operations, but did not take a position on Florida's claims—and did not specifically address how it would respond to a decree if one were entered. U.S. Post-Trial Amicus Br. (Dec. 15, 2016), Dkt. No. 631.

On February 14, 2017, the Special Master issued his Report and Recommendation. At the outset, he concluded that the "evidentiary hearing made clear" that "Florida points to real harm and, at the very least, likely misuse of resources by Georgia." Report 31. Nevertheless, the Special Master reasoned that the

case turned on "a single, discrete issue"—whether Florida had shown that a cap on Georgia's consumption would redress its injury if the decree did not bind the Corps as well. *Id.* at 30-31. To answer that question, the Special Master considered whether Florida had proved, by "clear and convincing evidence," that the additional water generated by a cap would *necessarily* reach Florida and remedy its harm. *Id.* at 53-54, 69-70.

The Special Master recognized that the natural course of the additional water gained by limiting Georgia's consumption on the Flint would be to flow into Lake Seminole, a pass-through reservoir, and into Florida. *Id.* at 46-47. But the Special Master concluded that Florida had failed to prove "by clear and convincing evidence that increased streamflow on the Flint River *will inevitably* provide timely relief to Florida," reasoning that the Corps could "offset" the additional water flowing into "Lake Seminole by managing releases from its storage reservoirs" on the Chattahoochee. *Id.* at 52-53 (emphasis added).

The Special Master recognized that the Corps not only *can* allow additional flows through, but historically *has* exercised its discretion to allow additional water through, when it is available. *Id.* at 54-55, 60. But because there was "no guarantee" that the Corps would exercise its discretion in any particular way in the *future*, the Special Master concluded that Florida failed to prove by "clear and convincing evidence" that a decree capping Georgia's consumption of water "would provide a material benefit to Florida." *Id.* at 69-70. On that basis, alone, the Special Master recommended that the Court deny Florida's request for relief. *Id.* App. J (proposed decree).

G. The Corps' Record Of Decision Finalizing Its Revised Manual

On March 30, 2017, ten days after this Court formally received the Special Master's report, the Corps issued a Record of Decision finalizing a revised water control manual, different from the one that had been in effect at the time of trial. Among other things, the Record of Decision specifically emphasized that the Corps did not intend its new manual to "apportion the waters of the ACF Basin among the States or in any way prejudice the Supreme Court . . . with respect to a future apportionment of the waters of the ACF Basin." *Id.* at 18. To the contrary, the Corps stated: "Should the Supreme Court issue a decree apportioning the waters of the ACF Basin . . . [the Corps] would take those developments into account and adjust its operations accordingly, including new or revised [manuals] . . . ." *Id.*

SUMMARY OF ARGUMENT

The Special Master correctly recognized both the harm to Florida from Georgia's exploding consumption and the inequitable nature of that consumption. But he mistakenly believed that this Court was powerless to issue a decree because there was "no guarantee" about how the Corps would respond to one if it were issued. Report 69. This Court should correct that legal error and return the case to the Special Master.

I. The Special Master explicitly premised his recommendation on an unprecedented redressability requirement. He believed that Florida was required to show to a certainty that a decree in its favor would fully redress its injury. This Court, however, has held that "[u]ncertainties about the future . . . do *not*

provide a basis for declining to fashion a decree" in an equitable-apportionment action. *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017, 1026 (1983) (*Idaho II*) (emphasis added). In addition, even in the context of conventional litigation, this Court has held that a plaintiff need only show a likelihood of redress. *See, e.g., Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 103 (1998). The Special Master then compounded that error by holding that Florida was required to meet his redressability standard by an unprecedented burden of proof.

II. The record and the Corps' own statements establish redressability under the proper legal standard, no matter what burden of proof applies.

A. As an initial matter, it is undeniable that water saved by reducing Georgia's consumption along the Flint River or Lower Chattahoochee will *necessarily* flow into Florida, because, as the Special Master found, the Corps lacks storage capacity with which it could hold that water back before it flows into Florida, even if it wanted to do so. That fact alone is sufficient to establish redressability. The possibility that the Corps might *offset* those additional flows by holding back water upstream does not preclude a finding of redressability. As this Court has held, the possibility that someone could frustrate the effectiveness of a judicial decree is not a sufficient ground for denying relief where, as here, the third party's action is not *required* to secure relief in the first place.

B. Even if the possibility that the Corps could offset increased flows were relevant to the redressability inquiry, the evidence shows that the Corps would be much more likely to facilitate a decree than to frustrate one. It is undisputed that the Corps has discretion to exceed its minimum flow guidelines

when additional water is available. And, as the Special Master found, the Corps has consistently done so in the past. That past conduct may not "guarantee" that the Corps will continue to allow higher flows through in the future—but it is strong evidence that it is *likely* to do so. And the entry of a decree by this Court apportioning the waters based on a finding of injury would only increase the likelihood that the Corps would do what it can to effectuate that decree.

Any doubt about that is eliminated by the Record of Decision accompanying the Corps' revised water manual, which the Corps released after the Special Master issued his report in this case. In that decision, the Corps stated: "Should the Supreme Court issue a decree apportioning the waters of the ACF Basin . . . [the Corps] would . . . adjust its operations accordingly." Record of Decision 18. This Court can, and should, take judicial notice of that formal agency decision. And that pronouncement, alone, establishes that the Corps is likely to do just what one would expect from a good government actor—*i.e.*, facilitate an equitable apportionment, not frustrate it.

C. Further, even if the Corps did choose to hold back releases from upstream reservoirs to offset the addition of water from the Flint, a decree would still provide redress. It is undeniable that limiting Georgia's consumption will result in more water in the system, or basin inflow. No matter how the Corps chooses to handle releases from its reservoirs during drought periods, increasing basin inflow would reduce the frequency, duration, and severity of drought operations by bolstering the Corps' reserves generally. In addition, increasing the amount of water flowing to Florida in non-drought periods would enhance the

Apalachicola's capacity to recuperate from drought periods. The Special Master discounted the significance of those benefits because they might not redress Florida's injury *completely*. But as this Court's precedents recognize, even a partial remedy is sufficient to establish redressability, especially when doing nothing would allow an existing harm to worsen.

III. On a broader level, accepting the Special Master's recommendation would flout the principles of equity guiding this equitable-apportionment action and defeat the Constitution's mechanism for resolving disputes between the States. It is well established that "equity will not suffer a wrong without a remedy." Yet that is precisely what the Special Master's report—which found both injury to Florida and inequitable conduct by Georgia—ultimately recommends. Moreover, refusing to enter any relief on these terms would shirk this Court's constitutional duty to resolve disputes among the States. Because States must disavow the traditional self-help mechanisms enjoyed by sovereigns to respond to threats outside their borders when they enter the Union, the Court's performance of that duty is critical to ensuring the health and tranquility of the Republic.

ARGUMENT

Although we are a nation of 50 States, we remain a land of shared natural resources. This Court has held time and again that "a State may not preserve solely for its own inhabitants natural resources located within its borders." *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017, 1025 (1983) (*Idaho II*) (citing cases). Indeed, "States have an affirmative duty under the doctrine of equitable apportionment to take reasonable steps to preserve and even to augment the natural resources

within their borders for the benefit of other States." *Id.* Because Georgia has flagrantly violated that duty, Florida has turned to this Court to fairly apportion the waters of the ACF Basin, and thus stem Georgia's inequitable consumption of this shared resource. The Special Master found both that Florida has sustained "real harm" from Georgia's consumption of water and that Georgia's consumption is "unreasonable." Report 30-31. But he recommended that this Court simply deny Florida's request for relief. The Court should decline to adopt that recommendation.

I. THE SPECIAL MASTER BASED HIS REPORT ON A FLAWED CONCEPTION OF THE REDRESSABILITY REQUIREMENT

A. The Special Master Erred In Requiring Florida To Show That A Decree Is "Guaranteed" To Work

The Special Master based his entire recommendation on the premise that, even accepting that "Florida has sustained injury as a result of unreasonable upstream water use by Georgia," relief should be denied because Florida has failed to show that a decree is "guarantee[d]" to work. Report 30-31, 69.[6] The Special Master framed that ruling in terms of

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6 *See also, e.g.*, Report 30 ("Florida must prove that any water not consumed by Georgia as the result of a decree imposing a consumption cap *will* reach Florida and alleviate Florida's injury." (emphasis added)); *id.* at 31 (Florida has not proven redressability with "sufficient certainty"); *id.* at 48 (same); *id.* at 52-53 (evidence not sufficient to show "that increased streamflow on the Flint River *will inevitably* provide timely relief to Florida" (emphasis added) (emphasis added); *id.* at 69 ("There is *no guarantee* that

"redressability." *Id.* at 28-29; *see id.* at 3, 24, 30, 63, 69. That redressability requirement is legally flawed.

In order to invoke this Court's authority to undertake an equitable apportionment, this Court has imposed a heavy burden on States to show that they have suffered a "real and substantial injury or damage." *Idaho II*, 462 U.S. at 1027 (citing cases). But as noted, the Special Master based his report on the fact that Florida "*has* sustained injury," a finding he had "little question" about. Report 30-31 (emphasis added). Once a State establishes injury, the balance shifts and the inquiry changes. At that point, "[f]lexibility is the linchpin"—and "[u]ncertainties about the future . . . do not provide a basis for declining to fashion a decree." *Idaho II*, 462 U.S. at 1026 & n.10. As this Court has recognized, "[r]eliance on reasonable predictions of future conditions is necessary to protect the equitable rights of a State." *Id.* at 1026; *see also Nebraska v. Wyoming*, 325 U.S. 589, 616-17 (1945).

In *Idaho II*, this Court held that the Special Master had erred in concluding that the existence of "[u]ncertainties" about how a decree would work in practice, including the extent to which federally-operated dams would restrict the movement of the fish at issue, was reason to refrain from entering a decree at all. 462 U.S. at 1026-27. The Court concluded, however, that the Special Master had properly found that the complaining State (Idaho) had failed to establish either that it had sustained an injury or that the upstream States (Oregon and Washington) had "mismanaged the resource" at issue. *Id.* at 1027-28.

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the Corps will exercise its discretion to release or hold back water at any particular time." (emphasis added)); *see id.* at 3, 49, 54, 61.

Here, by contrast, the Special Master found both injury and mismanagement; yet he concluded that the lack of certainty about what the Corps would do in the future if a decree were entered should prevent this Court from entering any decree at all. That was error.

The Special Master's certainty requirement for establishing redressability not only ignores the "broad and flexible equitable concerns" that govern equitable-apportionment actions (*id.* at 1025), but replaces those concerns with an essentially paralyzing standard. As this case illustrates, the Special Master's rule creates a "chicken and the egg" dilemma in which the Court cannot be *certain* what effect a decree would have until it has entered one, but cannot enter a decree until it is *certain* what effect it would have. And, when, as here, a State has shown injury and mismanagement, that rule can only promote *waste*—a result that both this Court's precedents and equity more generally counsel strongly against. *See Washington v. Oregon*, 297 U.S. 517, 528 (1936) ("There must be no waste ... of the 'treasure' of a river." (quoting *New Jersey v. New York*, 283 U.S. 336, 342 (1931)); *infra* at 52-56.

The Special Master's rule also goes beyond the conventional requirements of Article III. This Court has repeatedly held that, to meet Article III's redressability requirement, a plaintiff need only show a *likelihood* of at least partial redress. *See, e.g., Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 103 (1998) (test is "a *likelihood* that the requested relief will redress the alleged injury" (emphasis added)); *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561-62 (1992) (same); *Larson v. Valente*, 456 U.S. 228, 244 n.15 (1982) ("[A] plaintiff satisfies the redressability requirement when he shows that a favorable decision will relieve a

discrete injury to himself. He need not show that a favorable decision will relieve his *every* injury.").

Moreover, in applying this standard, this Court has shown a special solicitude for States challenging environmental harms originating from conduct outside their borders in recognition of the self-help rights that States surrendered upon entering the Union. *See, e.g., Georgia v. Tennessee Copper Co.*, 206 U.S. 230, 237-39 (1907). *Massachusetts v. EPA*, 549 U.S. 497, 519-20 (2007), underscores how far the Court has been willing to take that special solicitude. But this case—in which, as the Special Master found, Florida has shown that it is *already* suffering "*real* harm" from consumption in Georgia, Report 31 (emphasis added)—presents a much more compelling situation for applying this principle than *Massachusetts v. EPA*, which concerned the far more tenuous possibility of harm *decades* later.

In stating that Florida "must prove that *any* water not consumed by Georgia as a result of a decree imposing a consumption cap *will* reach Florida and alleviate Florida's injury" (Report 30 (emphasis added)), the Special Master pointed to this Court's decisions in *Idaho ex rel. Evans v. Oregon*, 444 U.S. 380, 392 (1980) (*Idaho I*), and *Washington*, 297 U.S. at 523. Neither case held that a State must show a certainty of complete redress in order to secure relief even where, as here, an injury and inequitable conduct has been established, and both cases are distinguishable in key respects.

In *Washington*, the downstream State (Washington) claimed that the upstream State (Oregon) was "wrongfully diverting" water for irrigation purposes in Oregon. 297 U.S. at 518. Unlike this case, the Special Master there not only rejected

the claim of injury, but found that Oregon's use of the water was "reasonable, beneficial, and necessary." *Id.* at 524. In adopting the Special Master's recommendation that Washington's request for relief should be denied, this Court also recognized that there was a certainty that the water at issue would *not* get through to Washington anyway, because the water not only was "small at the beginning," but would be "quickly absorbed and lost in the deep gravel beneath the channel" before it reached the state line. *Id.* at 523. In other words, in *Washington*, the record established that relief was physically *im*possible. Here, by contrast, the Special Master recognized that redress was possible; he just concluded it was not guaranteed.

Idaho I does not support the Special Master's "guarantee" requirement either. In that case, the Court *rejected* the Special Master's recommendation that Idaho's action against Oregon and Washington be dismissed for failure to join the United States. 444 U.S. at 392-93. In the passage cited by the Special Master, the Court recognized that Idaho bore the burden of proving that it has been "adversely and unfairly affected" by the challenged conduct, *id.* at 392—a showing that Florida made here (Report 30-31). The Court by no means held that the case should be dismissed if there was uncertainty over whether a decree would work. In fact, instead of holding that any uncertainty should be resolved *against* the complaining State, the Court—citing *Washington*—stated that relief would be proper unless the evidence demonstrated "that natural and manmade obstacles *will prevent* any additional fish . . . from reaching Idaho in numbers justifying additional restrictions." 444 U.S. at 392 (emphasis added).

Accordingly, *Idaho I* and *Washington* simply stand for the proposition that a complaining State cannot prevail where the evidence shows that the proposed remedy is *certain to fail*. They by no means establish the converse: that a suit must be dismissed unless the complaining State shows that the relief sought is guaranteed to redress an injury that (as here) has been shown. If there were any doubt about that, it was eliminated when *Idaho I* returned to the Court two years later and the Court held that "[u]ncertainties about the future . . . do not provide a basis for declining to fashion a decree." *Idaho II*, 462 U.S. at 1026.

B. The Special Master Compounded This Legal Error By Requiring Florida To Establish Redressability With Clear And Convincing Evidence

The Special Master exacerbated this legal error by requiring Florida to meet his mistaken redressability standard with "clear and convincing evidence." Report 47. This Court has held that a State seeking to enjoin another State's "invasion of rights"—including its misallocation of water—bears the burden of showing by clear and convincing evidence that it has been *injured*. *See New York v. New Jersey*, 256 U.S. 296, 309 (1921); *Connecticut v. Massachusetts*, 282 U.S. 660, 666-67, 669 (1931). That heightened burden reflects the Court's "traditional reluctance *to exercise* original jurisdiction in any but the most serious of circumstances." *Nebraska v. Wyoming*, 515 U.S. 1, 8 (1995) (emphasis added). But this Court has never held that, once an injury has been shown by clear and convincing evidence, the injured State must also establish by clear and convincing evidence that a decree is certain to redress that injury. Report 30.

And imposing such a burden would frustrate the *flexibility* that this Court has emphasized is essential for fashioning relief in such cases. *Supra* at 30.

Here, the Special Master framed his redressability ruling on the premise that Florida *has* proved substantial injury by clear and convincing evidence. Report 30-31. Florida presented evidence at trial of numerous injuries it has suffered, and the Special Master gave particular attention to the "unprecedented collapse of its oyster fisheries." *Id.* at 31. That finding is sufficient in itself to invoke this Court's original jurisdiction. *See New Jersey v. New York*, 283 U.S. at 345 (entering decree predicated on harm stemming from "the effect of increased salinity . . . upon the oyster fisheries").[7]

Once Florida proved by clear and convincing evidence an injury warranting the exercise of this Court's original jurisdiction, the equation changes. At that point, the question is no longer whether this Court should exercise its original jurisdiction to decide the States' dispute, but rather which State is in the right and what relief is appropriate. And on *that* question, there is no reason to tilt the scale in favor of Georgia merely because it is the upstream State and can seize water without need for this Court's intervention. To the contrary, once this Court's jurisdiction is properly invoked, "[e]ach State stands on the same level with all the rest." *Kansas v. Colorado*, 206 U.S. 46, 97-98 (1907). And this Court's role is "to settle th[e] dispute

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[7] Because of his redressability ruling, the Special Master did not need to opine further on the harm that Florida has suffered. Report 34. He had "little question," however, "that Florida has suffered harm from decreased flows in the River." *Id.* at 31.

in such a way as will recognize the *equal* rights of *both* [States] and at the same time establish justice between them." *Id.* at 98 (emphasis added).[8]

In any event, the Special Master's central error was in holding that Florida was required to show that a decree was "guarantee[d]" to work. Report 69. Under the correct legal standard, the evidence establishes that Florida has met the redressability requirement no matter what burden of proof applies.

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[8] In *Colorado v. New Mexico*, this Court held that, where the downstream State (New Mexico) had established injury, the burden shifted to the upstream State (Colorado) to prove that its injurious conduct nevertheless should be allowed under an equitable balancing. *See Colorado v. New Mexico*, 459 U.S. 176, 187 n.13 (1982) (*Colorado I*); *Colorado v. New Mexico*, 467 U.S. 310, 317-18, 320, 323-24 (1984) (*Colorado II*). The question at the "equitable balancing" stage of the inquiry is—as the Special Master here recognized—whether the "redress" the Court can provide would be "equitable." Report 27. The Special Master declared that application of *Colorado I*'s burden-shifting principles "in the context of a dispute between riparian states is not an altogether straightforward exercise," *id.* at 28-29 n.23, and ultimately avoided that issue (and the "equitable balancing" inquiry) entirely by introducing a threshold requirement that Florida establish a guarantee of complete redress by clear-and-convincing evidence. As explained above, that was error. And it was an error that fundamentally altered the nature of the inquiry: even assuming riparian principles would somehow mean that the downstream State—rather than the upstream diverter, as in *Colorado I* and *Colorado II*—should bear the burden of proof at the equitable-balancing stage, the analysis still requires a *balancing* of the equities. The Special Master's threshold redressability ruling, by contrast, gave no weight whatsoever to Georgia's inequitable conduct and the magnitude of Florida's injury. Moreover, the Special Master did not complete the full analysis of the harms Florida faced and other factors that would be necessary before balancing the equities. *See id.* at 34.

II. THE RECORD AND CORPS' STATEMENTS ESTABLISH REDRESSABILITY UNDER THE CORRECT LEGAL STANDARD

Because the Special Master's recommendation is based on a legal error concerning what Florida was required to show to prove redressability, the Court should, at a minimum, send the case back and ask the Special Master to consider redressability under the correct standard. But for several independent reasons, this Court also can, and should, hold that redressability is no impediment to entering relief in this case.

A. The Possibility That The Corps Could "Offset" The Impact Of A Decree Is No Basis For Denying Relief

As an initial matter, the possibility that the Corps could act to negate the benefits of a decree should not factor into the *redressability* analysis at all. Under this Court's precedents, a third party's independent discretion is relevant to the redressability inquiry only where "redress of the ... injury in fact [plaintiffs] complain of *requires action* ... by [an unjoined party]." *Lujan*, 504 U.S. at 571 (plurality opinion) (emphasis added); *see also Utah v. Evans*, 536 U.S. 452, 514 (2002) (Scalia, J., dissenting) (explaining that redressability was not in issue where "redress of the plaintiffs' injuries *did not require action* by an independent third party that was not (and could not be) brought to answer before a federal court" (emphasis added)). In other words, when A sues B to stop B from harming A, the possibility that C could interfere with a court-ordered remedy is not a basis to conclude that A has failed to establish redressability—unless C's action is *required* for A to obtain relief.

Here, it is clear that the Corps' involvement is not *required* for Florida to secure redress from Georgia's overconsumption of water. Most of the water at issue is consumed by excessive irrigation in the Flint River and lower Chattahoochee Basins. *See* Report 32-33; Hornberger PFD ¶ 112; Sunding PFD at 44, Tables 4, 5 (Nov. 4, 2016), Dkt. No. 555. The additional water generated by capping Georgia's consumption there *will* flow into Florida because the only thing standing between that water and Florida is a "run-of-river" facility (Jim Woodruff Dam) that lacks any appreciable storage capacity. *See supra* at 18. No action is required on the part of the Corps to ensure that the additional water generated by capping consumption in the Flint and lower Chattahoochee Basins reaches Florida. Nature will do all the work.

In a crude sense, Lake Seminole is like a sink that drains into the Apalachicola Basin, and the Chattahoochee and Flint Rivers represent a two-handled faucet. The Corps has some control over one faucet handle (the upper Chattahoochee); Georgia has complete control over the other handle (the Flint). Georgia's consumption from irrigation along the Flint has reduced the flow from the second faucet to a trickle, and Florida now asks the Court to enjoin the over-consumption and thereby re-open the second faucet. There is no question that the Court could do that, and that Georgia can indeed open that faucet by limiting its consumption along the Flint.

Georgia does not dispute that the Jim Woodruff Dam is a "run-of-river project." Report 47. Rather, Georgia argues that the Corps will exercise its discretion to "offset any increased flows from the Flint River into the Apalachicola River by withholding more

water upstream" on the Chattahoochee. *Id.* As explained next, if this Court enters a decree capping Georgia's consumption, it is by no means likely that the Corps would act to offset the benefits of that decree. But even if that response were likely, it would not preclude a finding of redressability under the case law discussed above, because the possibility that a third party could take action to frustrate or impair a court-ordered remedy is not a basis to find lack of redressability where, as here, the third party's action is not *required* to secure relief in the first place.

This is not to say that the possibility that an absent third party will frustrate the effectiveness of a judicial decree is irrelevant altogether. Federal Rule of Civil Procedure 19(b) allows a court to take that into account in deciding whether, "in equity and good conscience," a case should proceed where a necessary party cannot be joined. And, indeed, Georgia based its initial motion to dismiss on a Rule 19, "indispensable party" analysis. But the Special Master denied that motion after finding that all of the factors pointed against dismissal. *See* Order on Ga.'s Mot. to Dismiss 11-22.

It is clear, moreover, that the Special Master did not base his later recommendation that the Court deny Florida relief on Rule 19 or a joinder analysis. Unlike the "redressability" rule on which he premised his report, which postulates that any uncertainty about how the Corps would respond to a decree mandates dismissal, the Rule 19 inquiry turns on a balancing of four factors: (1) whether a judgment in the absence of the United States would prejudice the United States (or any existing parties); (2) whether any such "prejudice could be lessened or avoided by" protections in any resulting decree; (3) whether a judgment in the

United States' absence would be adequate; and (4) "whether [Florida] would have an adequate remedy if the action were dismissed for nonjoinder." *See* Fed. R. Civ. P. 19(b)(1)-(4). And as the Special Master recognized, in invoking Rule 19 as a defense, *Georgia* bore the burden of "prov[ing] that any decree providing for a cap on Georgia's consumption would be ineffective absent a decree binding on the Corps." Order on Ga.'s Mot. to Dismiss 13.

To make a recommendation based on Rule 19, the Special Master's report would have needed to address each of those factors, and then balance them to make an ultimate judgment as to whether Georgia had proved that, in "equity and good conscience," this action should not be allowed to proceed. The Special Master's report does not do that. Nor does his report revisit his prior conclusions that any prejudice to the United States or Georgia due to the absence of the United States could be avoided, and that Florida would have no other adequate remedy if this action were dismissed. *See* Order on Ga.'s Mot. to Dismiss 16-22; *see also Pasco Int'l (London) Ltd. v. Stenograph Corp.*, 637 F.2d 496, 501 n.9 (7th Cir. 1980) ("The absence of an alternative forum would weigh heavily, if not conclusively against dismissal . . . ."). There is thus no way to shoehorn his redressability analysis into the more flexible and equitable mold of a Rule 19 determination.

B. The Evidence And Corps' Statements Establish That The Corps Is Likely To Facilitate A Decree If One Is Entered

Even assuming that the Corps' future conduct—and its exercise of discretion—is relevant in assessing redressability, the evidence at trial and the Corps' statements after trial overwhelmingly establish that

the Corps is likely to facilitate, rather than frustrate, a decree entered by this Court. No more is required to establish redressability under this Court's precedents.

The Corps' operating rules do not require it to hold back water that would otherwise flow into Florida through the Jim Woodruff Dam. Instead, the manual constrains the Corps' discretion in the opposite manner—requiring it to pass along at least a designated *minimum* flow amount. For example, in drought operations, the Corps must release a minimum flow of at least 5,000 cfs into Florida. But as the Special Master found, "the Corps retains discretion to release *more* than the required 5,000 cfs minimum" when that water is available. Report 53 (emphasis added); *see id.* at 53-54, 60-61. Georgia's own expert admitted as much. *See id.* at 55.

This is not a hypothetical scenario. As the Special Master recognized, this is exactly what the Corps has done in the past when extra water has been available—exercised its discretion to allow water significantly in excess of the minimum required flow. *See id.* at 55, 38. During the 2012 drought, for example, the Corps consistently released several hundred cfs more than the minimum flow levels its manual required, and similar trends were apparent during earlier years, including during 2008 drought operations. *See, e.g.*, Shanahan PFD ¶ 60, Table 4 (Nov. 4, 2016), Dkt. No. 552; FX-811, Shanahan Def. Expert Rep. 2-3, 20. The evidence demonstrates that the Corps consistently made discretionary releases greater than 5,000 cfs even during drought operations when basin inflows were less than 5,000 cfs. *See* JX-128, https://waterdata.usgs.gov/usa/nwis; JX-137, http://water.sam.usace.army.mil/acfframe.htm.

The Special Master nevertheless concluded that this evidence failed to establish redressability because there was still "no guarantee" about how the Corps would exercise its discretion in the future. Report 69-70, 58; *see also id.* at 56 (Florida showed "only that the Corps may have exercised its discretion to release more than it was required to release *in the past;* it has not proven that the Corps will release more than the minimum *in the future.*"). That conclusion was based on the Special Master's erroneous belief that Florida was required to establish redressability by a certainty—*i.e.*, what *will* happen. This Court, however, at most requires a plaintiff to show a likelihood of redress and, in evaluating whether that standard is met, the Court has relied on past practice. *See, e.g., Bennett v. Spears*, 520 U.S. 154, 170-71 (1997).

When it comes to the past, it is also significant that, in 1997, when Florida, Georgia, and Alabama agreed to an interstate compact that put in place a framework for trying to work out an agreed-upon allocation formula, Congress passed a law stating that "all state and *federal* officials ... administering other state and federal laws affecting the ACF Basin *shall, to the maximum extent practicable,* ... administer those laws in furtherance of the purposes of this Compact and the allocation formula adopted by the Commission." Pub. L. No. 105-104, § 1, 111 Stat. at 2255 (emphasis added). That law itself is a strong indication that federal policy would favor facilitating an equitable apportionment.

Indeed, pointing to this very law, the United States, in a brief signed by the Solicitor General, stressed that there was no reason to "suggest that the Corps would ignore ... a decree if it were entered in this case" and that "[t]he Corps may well be able to accommodate any

agreement on water allocation between the states—subject to the limits of the Corps' authority." U.S. Opp. to Ga.'s Mot. to Dismiss 18 n.4. The United States could hardly be expected to take an equitable apportionment entered by this Court any less seriously than an allocation agreed to by the parties. Moreover, when Georgia argued at the outset of this case that the Corps would simply "increase impoundments upstream to offset increased flows from the Flint River," the United States responded that this was not only "speculation" but "entirely unwarranted" speculation under existing operational protocols. *Id.* at 19.

Nor would the United States have an institutional interest in resisting (or counter-acting) an equitable apportionment limiting Georgia's consumption. As the United States has repeatedly recognized in this case, "a cap on Georgia's consumption would not be likely to adversely affect the Corps' operations." U.S. Post-Trial Amicus Br. 3 n.1; *see also* U.S. Opp. to Ga.'s Mot. to Dismiss 16. Indeed, a cap could only *benefit* the Corps, because it would produce more water flowing into the Corps' system and thereby make it *easier* for the Corps to achieve its statutory objectives.

Moreover, the United States has stated that the Corps seeks to accomplish its federal objectives "while accommodating, to the extent possible, uses of the waters of the system as allowed by state law." U.S. Opp. to Ga.'s Mot. to Dismiss 4. As the Solicitor General has acknowledged, "the Corps has no authority to apportion water among States or determine water rights." *Id.* But if *this* Court were to apportion the water and hold that Florida is entitled to a greater portion of the water in the ACF Basin than it is currently receiving, there is no reason to think that the

Corps would use its operating discretion to nevertheless hold that water back for use in Georgia.

In reaching a different conclusion, the Special Master pointed to statements in the United States' post-trial amicus brief about how its guidelines might operate in various situations. *See* Report 48. For several reasons, the Special Master's reliance on that brief was misplaced. To begin with, the brief was not "evidence" and, because it was submitted after trial, Florida never had an opportunity to explain at trial, through its witnesses, why the United States' brief does not establish that a decree would be ineffective. Moreover, the brief was not directed to the key question—which is how the Corps would respond if this Court entered a decree. Instead, the brief simply addressed how the Corps' existing protocols and then-pending revisions would operate generally, without specifically addressing the impact of a decree.

The disconnect between the question the Special Master asked and the question that he needed to answer became particularly clear six weeks after he finalized his report, when the Corps released the revised version of its ACF manual. In the Record of Decision finalizing the revised manual's adoption, the Corps stated that "[s]hould the Supreme Court issue a decree apportioning the waters of the ACF Basin, . . . USACE would take those developments into account and adjust its operations accordingly, including new or revised [water control manuals], new or supplemental NEPA or ESA documentation, or any other actions as may be appropriate under applicable law." Record of Decision 18. This Court can, and should, take judicial notice of that official statement. *See, e.g., United States v. Louisiana*, 363 U.S. 1, 12-13 (1960) (taking judicial

notice of undisputed documents in original proceeding); Fed. R. Evid. 201(b)(2), (d); Sup. Ct. R. 17.2.

The Corps' Record of Decision also states that its revised manual "would not apportion the waters of the ACF Basin among the States or *in any way prejudice the Supreme Court*, the States, or Congress with respect to a future apportionment of the waters of the ACF Basin." Record of Decision 18 (emphasis added). It is difficult to believe that the Corps would make that statement if it expected to negate the benefits of such a "future apportionment" by offsetting the addition of water saved on the Flint by holding back releases upstream, while disregarding the ongoing harm to Florida on which a decree would have to be based.

Indeed, one of the Corps' statutory objectives is the protection of fish and wildlife. *See* U.S. Army Corps of Engineers, Final Environmental Impact Statement 2-61 (Dec. 2016) (recognizing that the Corps must consider impacts on fish and wildlife under the Fish and Wildlife Coordination Act of 1958).[9] And with respect to threatened and endangered species in particular, both the Corps and the Fish and Wildlife Service have recognized that the Endangered Species Act (ESA) would obligate the Corps to minimize harm to threatened and endangered species in the Apalachicola, such as the Gulf sturgeon and certain mussels. *See* JX-168, 2016 Fish & Wildlife Service Biological Opinion (2016 Biological Opinion) 193, 195-96; Dep't of the Army Mem. for Director of Civil Works

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[9] This document is available at http://www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/docs/10_ACF_FEIS_Dec 2016_Volume 4 Part_1.pdf?ver=2016-12-07-164634-643.

(Mar. 30, 2017) (ordering the Corps to effectuate the conditions set forth in the Fish and Wildlife Service's Biological Opinion).[10] There is no reason to assume that the Corps would disregard those obligations.

It is true that no one can say *for certain* what the Corps will do if this Court enters a decree. But in the face of all this, it is far more likely that the Corps would act to facilitate such a decree, rather than frustrate it.

C. Even If The Corps Chose To Hold Back Releases Upstream During Droughts, Meaningful Redress Is Still Likely

Because of the way that the Corps' system operates as a general matter, even if the Corps sought to hold back releases upstream during drought operations as Georgia surmises, a decree that reduces Georgia's consumption would still translate into meaningful redress in the Apalachicola Basin. That is because, at the end of the day, the less water Georgia consumes, the more water that will flow into—and out of—the system. And that can only help the fragile ecosystems that are currently dying in Florida due to a lack of water, including by reducing the frequency, duration, and severity of drought operations by the Corps.

This is largely elemental. As discussed, under the Corps' existing protocols, two of the most significant variables in determining the non-discretionary minimum release levels are (1) basin inflow and (2) conservation storage levels in the Corps' reservoirs.

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10 This document is available at http://www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/docs/ACF%20ASA%20Transmittal%20to%20DCW%2030%20March%2017.pdf?ver=2017-03-30-142328-340.

See supra at 18-19. Reducing Georgia's consumption of water in the Flint River Basin, or anywhere else, would have favorable effects on both of them: Limiting consumptive uses *necessarily* increases basin inflow, because less consumption by Georgia results in more water flowing into the system. *See* Report 2 n.1, 42. And when basin inflow is higher, then the storage levels in the Corps' reservoirs remain higher as well—either because there is more water with which to replenish them (if the Corps is in the process of increasing storage) or less need to deplete them (if the Corps is in the process of supplementing flows with releases from existing storage).

Anything that increases both basin inflow and the Corps' storage levels will ultimately produce higher minimum flows under the Corps' protocols—as one would expect, more water going in means more water coming out. *See* Tr. vol. 10, at 2523:12-16 (Shanahan) ("There is really no place else for it to go. It's not going to disappear someplace. All the water is going to Florida eventually. It's not a question of if; it's a question of when. And that's a hydrologic certainty."). That is certainly true in periods when the Corps is passing all basin inflow through to Florida. But the point holds for other periods as well.

With additional water as a result of a consumption cap, there would be less need for the Corps to supplement river flows with releases from conservation storage upstream during dry periods. As a result, it would take longer for conservation storage to reach the level (or zone) at which drought operations are triggered, and the Corps likewise would be able to restock its stores more quickly during normal or wet periods. In this way, a consumption cap would provide

what the United States has aptly referred to as a "cushion during low-flow periods," making it possible for the Corps "to maintain a flow rate of greater than 5,000 cfs for a longer period of time *without any alteration of the Corps' operations*." U.S. Opp. to Ga.'s Mot. to Dismiss 19 (emphasis added).

This "cushion" would help reduce the frequency, severity, and duration of drought operations. As the United States itself has explained, "[a]dditional basin inflow would be expected to, in some measure, *delay* the onset of drought operations ... and *quicken* the resumption of normal operations after a drought ends." U.S. Post-Trial Amicus Br. 2 (emphasis added); *see* U.S. Opp. to Ga.'s Mot. to Dismiss 19 (same). Those benefits themselves would provide real redress.

An example illustrates the point.[11] While 2011 was a drought year, the Corps did not enter drought operations until May 2012, when conservation storage dipped into composite "Zone 4"—the point at which drought operations began under the Corps protocols in effect at the time, Report 40-41—by a maximum of about 40,000 acre-feet. *See* GX-924 (chart of Army Corps composite storage in 2012, showing that storage only dipped briefly and incrementally into zone 4 in April/May and July 2012); FX-811, Shanahan Def.

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[11] This example is based on the operating protocols in effect at trial and on which the parties' evidentiary presentations were largely focused. The Corps released updated guidance *after* trial, first in near-final format a week after trial ended, *see* Report 35 n.29, and then in its final form six weeks after the Special Master issued his report, *see* Record of Decision. Florida obviously was not able to present evidence based on guidance that had yet to be issued, but the principles illustrated by the example in the text here would hold true under the new guidance as well.

Expert Rep. 2. Because drought operations are only commenced under the Corps' guidelines when conservation storage drops to the designated levels, if the Corps had been able to store (or not release) a mere 40,000 acre-feet more water in the 2011-2012 drought, it could have avoided drought operations entirely. And the remedy Florida has requested would have produced that water: It would increase streamflow by up to 2,000 cfs daily in peak summer months, *see* Sunding PFD ¶ 89, which amounts to roughly 60,000 cfs-days, or approximately 120,000 acre feet of additional available water. Thus, in the 2011-2012 drought alone, the Corps—following its own manual—could have stored a third of the water saved by a consumption cap in just one month to avoid drought operations entirely, while releasing most of the additional flows to benefit the Apalachicola.[12]

The Special Master failed to account for the way in which the Corps' system would necessarily yield benefits for Florida if more water were added to the system from the Flint or elsewhere. Instead, pointing to the testimony of Georgia expert Philip Bedient, the Special Master concluded that increased basin inflow would have only "minimal" effects on flows into Florida if the Corps attempted to hold the maximum amount of water back during drought operations. Report 65-66

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[12] Similarly, a decree could be fashioned so that Georgia is barred from withdrawing water under existing or future water supply contracts during particular periods. Doing so would reduce the demands on the Corps' upstream storage reservoirs and thus make it even less likely that the Corps would hold back releases in drought periods. Because of his redressability ruling, the Special Master never considered how a decree might be fashioned.

(citing Bedient PFD ¶¶ 55-57 (Nov. 4, 2016), Dkt. No. 559). The Special Master's reliance on Bedient, and conclusion that this "cushion" that would be generated by the boost in basin inflow did not establish redressability, was misplaced in two key respects.

First, Bedient's analysis was fundamentally flawed. Indeed, it was based on modeling software—the so-called "ResSim" program—that the Special Master himself recognized cannot reliably predict flows into Florida. *See* Report 60. The ResSim software has never been demonstrated to provide an accurate comparison of flows into Florida under significantly divergent consumption scenarios, the task Bedient employed it for here. And ResSim is inherently ill-suited for that task because it does not accurately reflect the Corps' practice of storing more water than it absolutely *has* to during wet periods in order to provide a bigger "cushion" when dry periods arrive. *See* Shanahan PFD ¶ 8(f); FX-785, Hornberger Expert Report 46-47; FX-794, Shanahan February 2016 Expert Report 2. By underestimating the amount of additional water the Corps would be able to store up and retain during *non*-drought periods, ResSim fails to capture the benefits of such increased storage in the form of delayed, avoided, or shortened drought operations, as discussed above.

Second, even if Bedient were correct that the increase in flows would be relatively small during "critical summer months" absent the sort of discretionary releases the Corps has made in the past, Report 66-67, the Special Master was wrong to conclude that that meant Florida has failed to establish redressability. Additional water, even if in more modest amounts, would still provide relief. The Special

Master seemed to believe that, to establish redressability, Florida was required to show that *all* the water produced by a decree would make it to the Apalachicola and redress Florida's injuries—*completely*. *See* Report 30 ("Florida must prove that *any* water not consumed by Georgia as the result of a decree imposing a consumption cap *will* reach Florida and alleviate Florida's injury." (emphasis added)). But that is not the standard. *See Larson*, 456 U. S. at 244 n.15 (a plaintiff "need not show that a favorable decision will relieve his *every* injury"); *supra* at 31-32.

In addition, even if (contrary to the evidence discussed above) the additional water generated by a decree only results in increased flows in non-drought periods, that would still provide meaningful redress by helping the Apalachicola ecosystems rejuvenate and recover from harms suffered in droughts. The EPA and Fish and Wildlife Service, for example, have identified levels of flow below which the Apalachicola River should be allowed to drop at most once in every four years, lest permanent harm occur—but the reduced flow in even normal years has caused the Apalachicola to fall below those levels in almost *every one* of the past 16 years. *See* FX-D-23 at 4.

If allowed to continue, the combination of reduced normal year flows and extreme low flows in drought years will have an irreversible effect on the River and Bay because—as EPA and the Fish and Wildlife Service explained—"[a]quatic populations can survive extremely stressful conditions and persist without essential habitat conditions occasionally, but not for many years in succession." *See* Instream Flow Guidelines, FX-599, at FL-ACF-02545882. Increasing

flow in normal or wet periods would help eliminate these "extremely stressful conditions."

Moreover, a decree capping Georgia's consumption would at least prevent the situation from worsening in the Apalachicola. As the Special Master found, Florida has already sustained injury as a result of Georgia's mismanagement of the waters at issue. If this Court denies Florida's request for relief, Georgia would be free to continue, and even increase, its consumption as it wishes—"regardless of the long-term consequences for the Basin." Report 34. And that is exactly what will happen: left to its own devices and wishes, Georgia's consumption in the coming decades will only continue to increase, significantly. *See* Hornberger PFD ¶¶125-26. Preventing an existing injury from worsening is itself a sufficient basis to enter a decree.

III. THE SPECIAL MASTER'S REPORT SUBVERTS PRINCIPLES OF EQUITY AND THE ROLE OF THIS COURT

The Special Master's recommendation that the Court refuse relief because redress is not "guaranteed" is fatally flawed under the principles that this Court applies even in ordinary cases. *Supra* at 31-32. But this is not an ordinary case—it is an equitable apportionment action. And this Court has repeatedly stressed that it is guided in such proceedings by "broad and flexible equitable concerns," *Idaho II*, 462 U.S. at 1025, rather than "hard and fast rule[s]," *Nebraska*, 325 U.S. at 616. *See Kansas v. Nebraska*, 135 S. Ct. 1042, 1053 (2015) ("When federal law is at issue and the 'public interest is involved,'" a federal court's "'equitable powers assume an even broader and more flexible character than when only a private controversy is at stake.'" (citation omitted)).

The Special Master's recommendation flouts two time-honored principles of equity. The first is that "equity will not suffer a wrong without a remedy." *Independent Wireless Tel. Co. v. Radio Corp. of Am.*, 269 U.S. 459, 472 (1926) (citing 1 *Pomeroy's Equity Jurisprudence* §§ 423, 424 (4th ed. 1918)); *CIGNA Corp. v. Amara*, 563 U.S. 421, 440 (2011) ("[E]quity suffers not a right to be without a remedy." (citing R. Francis, *Maxims of Equity* 29 (1st Am. ed. 1823))). And the second is that "[e]quity abhors a windfall." *US Airways, Inc. v. McCutchen*, 663 F.3d 671, 679 (3d Cir. 2011), *vacated on other grounds*, 133 S. Ct. 1537 (2013); *see also Prudential Ins. Co. of Am. v. S.S. Am. Lancer*, 870 F.2d 867, 871 (2d Cir. 1989).

The Special Master found that "Florida points to real harm and, at the very least, likely misuse of resources by Georgia." Report 31. As to Georgia's misuse, the Special Master elaborated "that Georgia's upstream, agricultural water use has been—and continues to be—largely unrestrained"; "the exceedingly modest [conservation] measures Georgia has taken have proven remarkably ineffective"; and "Georgia's position" is that its "agricultural water use should be subject to no limitations, regardless of the long-term consequences for the Basin." *Id.* at 32-34. Equity thus cries out for a remedy. Yet, the Special Master recommended that the Court dismiss this action because there is "no guarantee" (*id.* at 69) as to how the Corps will respond to a decree. That would grant Georgia an enormous windfall: the ability to continue its inequitable consumption indefinitely, with this Court's (effective) stamp of approval, "regardless of the long-term consequences for the Basin." *Id.* at 34.

Adopting the Special Master's recommendation also would fundamentally circumscribe the constitutionally assigned role of this Court in resolving disputes among the States. More than a century and a half ago, in another suit between these same States in which it was also argued that the absence of the United States as a party meant that Florida could obtain no relief, this Court recognized its "duty . . . to mould its proceedings for itself, in a manner that would best attain the ends of justice, and enable it to exercise conveniently the power conferred" by Article III's grant of original jurisdiction. *Florida v. Georgia*, 58 U.S. (17 How.) 478, 492 (1854). Even if ordinary rules of procedure *would* preclude entry of a decree in an ordinary case, the Court recognized, a suit between two sovereigns concerning a serious dispute is no ordinary case. *Id.* at 494 ("It would hardly become this tribunal, intrusted with jurisdiction where sovereignties are concerned . . . to do injustice rather than depart from English precedents."). That duty is no less compelling today.

The role that the framers assigned to this Court, in particular, as a neutral arbiter of serious disputes between the States makes the Special Master's recommended outcome in this case especially untenable. If Florida were a foreign state, "all must admit that she could seek a remedy by negotiation, and, that failing, by force," for the injuries that Georgia has inflicted. *Missouri v. Illinois*, 180 U.S. 208, 241 (1901). "Diplomatic powers and the right to make war having been surrendered to the general government, it was to be expected that upon the latter would be devolved the duty of providing a remedy, and that remedy . . . is found in the constitutional provisions" for original actions in this Court between States. *Id.*

As this Court held at Georgia's urging a century ago, "[w]hen the states by their union made the forcible abatement of outside nuisances impossible to each, they did not thereby agree to submit to whatever might be done. They did not renounce the possibility of making reasonable demands on the ground of their still remaining quasi-sovereign interests; and the alternative to force is a suit in this court." *Georgia v. Tennessee Copper Co.*, 206 U.S. at 237. Given the vital role this Court's jurisdiction plays under the constitutional design as a replacement for armed conflict in resolving controversies between the States, this Court should not effectively neuter that option by holding it unavailable whenever it cannot "guarantee" that the relief it would provide will fully redress a complainant State's proven injury. Neither Article III nor any of this Court's precedents permits such a "failure of justice" in these circumstances. *Florida v. Georgia*, 58 U.S. at 494-96.

This Court has never refused to grant an equitable apportionment where both injury and inequitable conduct had been found on the ground that a third party *might* interfere with the effectiveness of its remedy. To do so here would be to effectively cede control over a substantial portion of this Court's original docket to the Corps, which operates dams—and thus has the potential to affect water flows—on many of the nation's great waterways. That is plainly not what the founders intended when they empowered this Court to "mould its proceedings for itself, in a manner that would best attain the ends of justice" in disputes between sovereign States. *Id.* at 492.

The answer here cannot be to say, as the Special Master has recommended, that, yes, Florida is being

injured by decreased flows; yes, Georgia's consumption is inequitable; and, yes, Georgia's position is that its "agricultural water use should be subject to no limitations, *regardless of the long-term consequences for the Basin*," Report 34 (emphasis added); but no, this Court can do nothing about it because one cannot say, with 100% certainty today, what the Corps will do if a decree is entered. Neither this Court's precedents, time-honored principles of equity, nor simple common sense supports that unjust result.

CONCLUSION

The Court should decline to adopt the Special Master's recommendation, return the case to the Special Master, and instruct the Special Master to determine whether Florida is entitled to the requested relief under the correct legal framework.

Respectfully submitted,

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STATE OF FLORIDA,
Plaintiff,
v.
STATE OF GEORGIA,
Defendant.

ON EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER

SUR-REPLY IN SUPPORT OF EXCEPTIONS TO REPORT OF THE SPECIAL MASTER

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INTRODUCTION

From the outset, Georgia's position has been that Florida's equitable apportionment action should not proceed because, first, Georgia has not wasted any water or injured Florida in any way and, second, Florida could not get relief through an equitable apportionment in any event because the U.S. Army Corps' of Engineers is not a party to this action.

After a trial, the Special Master squarely rejected the first argument, and concluded that the case must be decided on the premise that "Florida has sustained injury as a result of unreasonable upstream water use by Georgia." Report 30. Georgia takes issue with Florida's characterization of the Special Master's statements as "findings." Resp. 4. But the Special Master's report describes in detail both the "real harm" Florida has "suffered ... from decreased flows in the River," and Georgia's "largely unrestrained" agricultural water use. Report 31, 32; *see id.* at 31-34. Georgia did not file exceptions to the Special Master's report, and so has waived any challenge to it. As this case comes to this Court, both injury and inequitable conduct must be accepted (a point the United States squarely recognizes, *see* U.S. Br. at 19, 23, 31-32).

As for Georgia's claim that this case cannot proceed without the Corps, the Special Master initially rejected that argument, too, by denying Georgia's motion to dismiss. In doing so, the Special Master found that this case not only may proceed without the United States as party, but that it *should* proceed in the interests of "equity and good conscience," especially since Florida would be left without a remedy for its injury if this action were dismissed. FL Br. 23, 40. Georgia declined

to file any exception to that ruling, too, and so that also must be accepted as this case comes to the Court.

The Special Master nevertheless concluded that this case should be dismissed because, while a consumption cap undoubtedly would result in more water flowing into Florida from the Flint River, there was "no guarantee" that the Corps would not *offset* those additional flows by holding back water in reservoirs on the Chattahoochee River. Report 69. As Florida explained in its opening brief (at 29-36), the Special Master erred as a matter of law in requiring Florida to meet that "guarantee" standard in establishing redressability. This Court has never set such an impractical requirement, either in equitable apportionment cases or under Article III generally. In response, Georgia does not seriously defend the guarantee standard, but instead tries to recast the Special Master's report. The report, however, clearly refutes Georgia's position.

And Georgia has a bigger problem, anyway. After the Special Master issued his report, the Corps issued a Record of Decision (ROD) that addressed how the Corps would respond to a decree in this case. The Corps stated that, if this Court were to issue an equitable apportionment, the Corps "would take [that decision] into account and adjust its operations accordingly." U.S. Br. 30 (quoting ROD 18). In its brief to this Court, the United States not only has affirmed that it "stands behind that statement," but elaborated that "a decision by this Court ... would necessarily form part of the constellation of laws to be considered by the Corps when deciding how best to operate the [ACF Basin]." *Id.* at 30, 32. The Special Master did not have the benefit of those

pronouncements when he issued his report, but they, by themselves, establish redressability under a proper analysis.

It is impossible to say, with complete certainty, how the Corps would adjust its operations in response to a decree. But as this Court has held, "asking for absolute precision in forecasts about the benefits and harms of [a requested apportionment] would be unrealistic." *Colorado v. New Mexico*, 467 U.S. 310, 322 (1984) (*Colorado II*). Instead, the Court has held, "[r]eliance on reasonable predictions of future conditions is necessary to protect the equitable rights of a State." *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017, 1026 (1983) (*Idaho II*). Based on the United States' representations, it is at the very least reasonable to predict that the Corps would respond to an equitable apportionment by this Court just as one would expect—by adjusting its operations to effectuate that decree consistent with this Court's decision and other applicable law. Indeed, it is Georgia that asks this Court to rely on sheer speculation in arguing otherwise.

The Court should decline to adopt the Special Master's recommendation and return the case to him with instructions to allow it to proceed.

ARGUMENT

I. GEORGIA DECLINES TO DEFEND THE "GUARANTEE" STANDARD THE SPECIAL MASTER ACTUALLY APPLIED

As Florida has explained (at 29-30 n.6), the Special Master recommended (at 69) that this Court deny relief because there is "no guarantee" about how the Corps will react to a decree. The Special Master thought that

Florida had failed to establish redressability because it is "uncertain" (Report 34)—*i.e.*, not certain—that the additional water produced by a decree would flow through to Florida. This Court has never held a State to such a certainty standard in establishing redressability. And Georgia does not even attempt to defend that standard.

Instead, Georgia tries to duck the issue by claiming (at 4) that the Special Master "applied no such standard." *See also* Resp. 24. But that argument cannot be squared with what the Special Master actually said in his report. For example:

- The Special Master reasoned that, unless he could "mandate" a change in the Corps' practices, he could not be "assure[d]" that Florida could obtain relief. Report 3.
- The Special Master faulted Florida because it did not show "that the Corps *must* (or will choose to)" allow through "*all* additional flows." *Id.* at 48 (emphases added).
- The Special Master faulted Florida's evidence because it did not show that a decree "will *inevitably* provide timely relief." *Id.* at 52-53 (emphasis added).
- Although the Special Master found that "the Corps can release" more water, he stressed that this does not show "that the Corps will make such releases." *Id.* at 54; *see id.* at 56.
- And the Special Master faulted Florida's evidence because it failed to show that additional water would "*necessarily* pass downstream." *Id.* at 61 (emphasis added).

None of that makes sense unless the Special Master applied a *guarantee* standard (as he did).

Meanwhile, Georgia uses misleading quotes in attempting to recast the Special Master's report. For example, it suggests the Special Master found that "the Corps' operations *would* 'offset any increased flows' resulting from Florida's proposed cap." Resp. 35 (emphasis added) (quoting Report 47). But the Special Master did not find that the Corps *would* offset increased flows at all; he simply found that "the evidence suggests that the Corps *may* operate its projects . . . to offset any increased flows." Report 48 (emphasis added). And that just proves the point. The mere *possibility* of an offset was enough to defeat redressability only because the Special Master in fact applied a *certainty* standard.

Georgia also claims (at 34) that Florida has distorted the Special Master's ruling by emphasizing the Special Master's use of "'guarantee.'" But the Special Master used that language in perhaps the most important paragraph of his report—the "CONCLUSION"—where he stressed that "[t]here is no guarantee that the Corps will exercise its discretion to release or hold back water at any particular time." Report 69. And that was no accident; "guarantee" perfectly captured his redressability ruling. As the above quotations (and others, *see* FL Br. 29 n.6) demonstrate, the Special Master insisted that Florida establish a certainty that the Corps would act a particular way.

Georgia points to the Special Master's statement that the benefits of a decree were "uncertain and speculative." Resp. 35 (citing Report). But it fails to consider that statement in context. The Special Master

did not point to "uncertainty" in analyzing the *likelihood* that the Corps would act a particular way. Rather, he relied on Florida's inability to show that the Corps was *certain* to release water at any particular time as the basis for finding that it had failed to establish redressability. As the Special Master put it, "any release in excess of the mandatory minimum is inherently discretionary *and therefore uncertain*." Report 56 n.38 (emphasis added). Under his ruling, that "uncertainty"—*i.e.*, the lack *of* certainty about whether the Corps would accommodate a decree—was the dispositive factor.

As Florida has explained (at 29-36), that legal standard is clearly wrong. Article III has never imposed such a requirement. And this Court has held that "[u]ncertainties about the future ... do not provide a basis for declining to fashion a decree" in this context, because "[r]eliance on reasonable predictions of future conditions is necessary to protect the equitable rights of a State." *Idaho II*, 462 U.S. at 1026 & n.10. Thus, this Court has declined to insist on "absolute precision"—*i.e.*, certainty—in predicting the future when it comes to determining whether relief will be effective. *Colorado II*, 467 U.S. at 322. Yet "absolute precision"—that is, a "guarantee"—is exactly what the Special Master demanded here in gauging redressability.

Because the Special Master based his report on a "single, discrete issue" (Report 30)—redressability—that he analyzed under the wrong legal standard, his recommendation cannot stand.

II. AS THE UNITED STATES' BRIEF UNDERSCORES, THIS ACTION SHOULD BE ALLOWED TO PROCEED UNDER A PROPER REDRESSABILITY ANALYSIS

Under a correct redressability standard, it is clear—no matter what evidentiary standard is applied—that the case should go forward. The United States' statements by themselves confirm this. It has acknowledged that a decree would benefit Florida even without any changes to the Corps' operating rules, has said the Corps' adoption of the current Master Manual should not "in any way prejudice the Supreme Court" as to an "apportionment of the waters of the ACF Basin" (ROD 18), and has said that it would adjust its operations as necessary to accommodate a decree. That is more than enough to prove that Florida is likely to benefit—significantly—from a decree. Indeed, while no more is required, the record establishes a high likelihood of real redress.

A. In Gauging Redressability, This Court Has Never Required A State To Show More Than A Likelihood Of Redress

As Florida has explained (at 30-34), under this Court's precedents, a State need only establish a *likelihood* of redress if a decree is entered. That is especially true where, as here, the State already has shown that is has suffered "real harm." Report 31.

Although it does not defend the Special Master's certainty standard, Georgia does try to ratchet up the settled likelihood standard. In effect, it asks this Court to hold that "reasonable predictions" (*Idaho II*, 462 U.S. at 1026) are not enough, and that a complaining State must instead prove that future conditions are

"*highly* likely" to improve as a result of a decree (Resp. 27 (emphasis added); *id.* at 28). This Court has never subjected a State to such a heightened redressability standard.

Georgia points (at 31-33) to *Washington v. Oregon*, 297 U.S. 517 (1936), and *Idaho ex rel. Evans v. Oregon*, 444 U.S. 380 (1980) (*Idaho I*). But as Florida has explained (at 32-34), those cases are no help to Georgia. First, neither involved a finding of either "real harm" or "misuse of resources" (Report 31), like the Special Master made here. *See Washington*, 297 U.S. at 523-24; *Idaho II*, 462 U.S. at 1027-28. And second, neither actually imposed a heightened redressability requirement. Indeed, even as it relies on these cases for support, Georgia is notably silent on the standard the Court actually applied in them. For good reason: the cases simply hold that where redress would be physically *impossible*, a decree will not issue. *Washington*, 297 U.S. at 523; *Idaho I*, 444 U.S. at 391-92.

This case does not involve anything like the "deep gravel" that would absorb water before it reached Washington, *Washington*, 297 U.S. at 523, or the "obstacles" that would stop fish from reaching Idaho, *Idaho I*, 444 U.S. at 392. Here, because Lake Seminole is a "run-of-river" project, it is clear that additional water from the Flint River *would* flow through to Florida. Report 37. The only question is whether the Corps would "offset" those flows by holding back releases upstream on a different river. And while it is true that the Corps *could* seek to offset the increased flows, the Special Master also recognized that the Corps could choose to allow through more water than its minimum requirements mandate—and that the

Corps has done just that in the past. Report 48, 54. The Special Master simply concluded that Florida had failed to show that this exercise of discretion was *guaranteed*.

Georgia's attempt to ratchet up the redressability standard also contradicts several key tenets of this Court's equitable apportionment cases: (1) Where, as here, a State *has* established injury, the Court should do everything it can to enter a decree, *Nebraska v. Wyoming*, 325 U.S. 589, 616-17 (1945); (2) the fact that a decree may be "difficult[]" to fashion is no basis to decline relief, *id.*; *Idaho II*, 462 U.S. at 1026; (3) instead of demanding "absolute precision" (*Colorado II*, 467 U.S. at 322-23) about what the future holds, "[u]ncertainties about the future . . . do not provide a basis for declining to fashion a decree," *Idaho II*, 462 U.S. at 1026; and (4) wasteful and inefficient uses, like the ones the Special Master identified along the Flint here (*see* Report 32-34), should not be tolerated, *Washington*, 297 U.S. at 524; *Colorado v. New Mexico*, 459 U.S. 176, 184 (1982) (*Colorado I*); *see id.* at 195 (O'Connor, J., concurring in the judgment).

Georgia points (at 29) to this Court's statements about the *equitable-balancing step* of an equitable apportionment action, at which the Court considers "the extent to which the benefits from the diversion will outweigh the harms to existing users." *Colorado II*, 467 U.S. at 323-24. But those statements do not support application of a heightened legal standard in determining the separate, threshold issue of redressability—before an equitable balancing of benefits and harms is even conducted.

The disconnect between the equitable-balancing analysis Georgia draws on now and the threshold

redressability question the Special Master actually decided is underscored by the difference between the evidence Georgia focuses on in its brief and the evidence the Special Master actually considered. Georgia makes the balancing of "benefits and harms" a central theme of its presentation to this Court, making apocalyptic (and overblown[1]) claims from the very first sentence of its brief on about the alleged harms of a decree *for Georgia*. But the Special Master never even considered—let alone endorsed—Georgia's contentions on that point. Because of his threshold redressability ruling, he never got to the equitable-balancing stage, and thus never made all the findings necessary for that stage.

If this Court declines to adopt the Special Master's recommendation, the case will go back to the Special Master. Presumably, after completing his fact finding (*see* Report 34), the Special Master will then undertake such an equitable balancing. But at that point, the findings the Special Master *has* already made will pose a significant problem for Georgia. As Justice O'Connor observed in her *Colorado I* concurrence, "[p]rotection of existing economies does not require that users be permitted to continue in *unreasonably wasteful or*

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[1] For example, Georgia claims (at 18) that "reducing irrigation for row crops" would cost "over $335 million." But the expert it cites for that assertion admitted that his estimate was based on *eliminating* all irrigation, and that he did not even consider the effect on crop yields of more modest reductions. *See* Tr. vol. 17, at 4463:14-4468:15 (Stavins). Florida also showed that, in fact, the proposed conservation measures would cost only $35.2 million a year. *See* Sunding PFD ¶ 90 Table 4 (Nov. 4, 2016), Dkt. No. 555. Those measures have been implemented successfully by other States as well. *See id.* ¶¶ 59-66, 83-87, 90 & Table 4.

inefficient practices," 459 U.S. at 195 (emphasis added)—exactly the kind of waste and inefficiency that the Special Master found as to Georgia's consumption for agricultural purposes here. *See* Report 32-34.[2]

Finally, Georgia errs in suggesting (at 33-34) that the "clear and convincing evidence" standard that Florida bore—and met, *see* Report 31-32—in establishing *injury* somehow ramps up the legal standard that governs redressability. As *Colorado II* makes clear, the "clear and convincing evidence" standard is an *evidentiary* burden about what *evidence* is required to prove the elements of a claim—*i.e.*, what is necessary to tip the "*evidentiary* scales" in the proponent's favor. 467 U.S. at 316 (emphasis added). That evidentiary standard, even when it applies (*see* n.2, *supra*), does not change—or heighten—the *legal* standard for redressability.

In any event, under the correct legal standard, the record establishes redressability even under the clear-and-convincing-evidence standard.

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[2] At that balancing phase, Georgia, not Florida, also will bear the burden of proof. FL Br. 36 n.8. In arguing otherwise, Georgia and its amici try to blur together the separate injury and equitable-balancing stages of the action, refusing to accept this Court's statement that the "burden ... shift[s]" between those two stages. *Colorado I*, 459 U.S. at 187 n.13; *see Colorado II*, 467 U.S. at 317. In any event, because the Special Master based his recommendation on redressability, this case, in its current posture, provides no occasion to reconsider the burden at that separate stage, which presumably explains why the United States does not address this issue.

B. The United States Has Confirmed That It Would Accommodate A Decree

The Special Master should have concluded that Florida established likelihood of redress on the record before him. But in a sense, that inquiry is now academic because events since the Special Master issued his recommendation are sufficient by themselves to establish redressability.

After the Special Master issued his report, the Corps issued a ROD along with its new Master Manual, which makes clear how the Corps would respond to a decision in this case: The Corps "*would* take [that] development[] into account and adjust its operations accordingly," including by revising its Manual. U.S. Br. 30 (emphasis added) (quoting ROD 18). Georgia claims (at 41) that the ROD cannot "override[]" what the Special Master said about the United States' post-trial brief. But, as the United States notes (at 29), the Special Master never considered how the Corps would respond to a decision by this Court. Indeed, his recommendation is premised on an assumption that the Corps would *not* change its rules. *See* Report 61.

The Corps' commitment that it not only "will review" any equitable apportionment in this case but will also "adjust its operations accordingly" (ROD 18) is sufficient by itself to establish redressability. This Court has held that redressability is established where "the practical consequence" of a decree is "a significant increase in the likelihood that the plaintiff would obtain relief," even where an agency relevant to providing that relief would not be formally bound by the decree. *Utah v. Evans*, 536 U.S. 452, 464 (2002); *see also Federal Election Comm'n v. Akins*, 524 U.S. 11, 25 (1998); *Bennett v. Spear*, 520 U.S. 154, 169-71 (1997).

Here, the agency has already made clear that it *would* review the decision and adjust its operations accordingly.

Georgia says (at 41) that Florida has "selectively quote[d]" the ROD. But as the material reproduced in the United States' brief (at 30) shows, Florida has not misrepresented the ROD at all. Georgia also suggests that the ROD is irrelevant because the "Manual *already reflects* [the Corps'] considered judgment" of how to balance authorized project purposes. Resp. 42. But the ROD specifically says that the Corps would "adjust"—*i.e.*, *change*—its operations in response to a decree, including by revising the Master Manual. ROD 18.

The Corps notes that it would consider "applicable law" in making such an adjustment. *Id.* But there is no inherent conflict between facilitating an equitable apportionment and complying with its statutory objectives. Indeed, the United States has recognized that a decree in this case would *not* prejudice its operations and, instead, could only facilitate them by leading to more water in the system. *See* U.S. Opp. to Ga.'s Mot. to Dismiss 16. And when the States tried to agree on an allocation formula, Congress made clear that the Corps should administer federal law *in furtherance of* that agreement. FL Br. 42. There is no reason to treat a decree from this Court any differently.

Moreover, as the United States recognizes (at 32), "a decision by this Court apportioning the waters of the ACF Basin . . . would necessarily form part of the constellation of laws to be considered by the Corps when deciding how best to operate the federal projects in the ACF Basin for their congressionally authorized

purposes." The Corps' existing Manual cannot "already reflect[]" such a decision, Resp. 42, when no such decision exists yet. Even if the Corps would be "technically free to disregard" the decision since it is not a party to this case, the United States itself recognizes that a decision by this Court would "alter[] the legal regime to which the action agency is subject." *Bennett*, 520 U.S. at 169.

Indeed, the United States, in its latest brief, has stated that, "if truly effective relief for the oyster fishery cannot be accomplished without the Corps changing its operations, then such a determination by this Court would likely *require* that the Corps engage in the required public processes and environmental reviews for revising the Master Manual, and adjust its operations to the extent permissible under law and consistent with the Corps' mission of operating the ACF system for its congressionally authorized purposes." U.S. Br. 33 (emphasis added) (footnote omitted).

The fact that it is impossible to say, today, what the precise outcome of that administrative process will be cannot mean that the case must be dismissed. That is exactly the "chicken and the egg" problem that Florida pointed out in its opening brief (at 31). As this Court has previously recognized, asking for such "absolute precision in forecasts . . . would be unrealistic"—and is unnecessary. *Colorado II*, 467 U.S. at 322. The Corps' and the Solicitor General's statements confirm that a workable decree—and meaningful relief—is, at the very least, *likely* if this Court issues an equitable apportionment. That, in itself, establishes redressability.

C. Even If The Corps Did Not Adjust Its Rules, A Decree Would Still Be Likely To Provide Meaningful Redress

The major developments since the Special Master issued his report are reason enough to decline his recommendation and send the case back. But as Florida has explained (at 40-52), the evidence at trial showed that a consumption cap was likely to result in meaningful relief for Florida, even if the Corps did not change its existing rules.

The United States' brief supports this argument, too. For example, the United States confirms that:

- The amount of water flowing into the ACF system—or "basin inflow"—will increase if Georgia consumes less on the Flint River. U.S. Br. 6-9, 16, 27-28.
- "[I]t is likely that additional flows resulting from a cap on Georgia's consumption would reach Florida without any changes in the Corps' operational protocols . . . ." *Id.* at 33.
- A decree would create an "additional 'cushion'" in the Corps' reservoirs that would delay onset of drought operations, allow the Corps to meet minimum flow requirements "longer" during extended droughts, and quicken resumption of normal operations, in which flows are higher. *Id.* at 16, 18, 28.
- And the Corps has discretion to release additional water—above the minimum flow requirements—including for fish and wildlife protection. *Id.* at 8-9, 22-23, 25.

This would all materially benefit Florida by sending *more water* to the Apalachicola, and reducing the most harmful periods (drought operations).

Georgia focuses on the post-trial brief the United States filed before the Special Master, explaining how a different Manual worked. But pointing to that brief, the Solicitor General has now clarified: "The United States does not mean to suggest that a consumption cap would provide no benefit to the Corps' operations in the ACF Basin or to Florida." *Id.* at 28. Instead, the United States explains that "increased basin inflows would generally benefit the ACF system by delaying onset of drought operations, by allowing the Corps to meet the 5000 cfs minimum flow longer during extended drought, and by quickening the resumption of normal operations after drought." *Id.* The United States is then careful to note that it "takes no position on whether Florida proved that those benefits are of sufficient quantity to justify relief in this case." *Id.*

Without denying that "the Corps has historically exercised its discretion to release more than the required minimum under [its protocols]" (Report 55), the United States claims (at 27) that those releases have been driven "by the need to serve authorized project purposes" and other objectives. But, as the United States recognizes (*id.*), "fish and wildlife conservation" is among those very purposes. Therefore, a decree premised on a finding of harm to fish and wildlife, including oysters, would confirm, if not increase, the justification for prior releases.

Indeed, following the issuance of a new Biological Opinion by the U.S. Fish and Wildlife Service in 2016, the Corps is now obligated under the Endangered Species Act to "provide pulses of water" at key times,

to identify new ways to "provid[e] more floodplain inundation" along the Apalachicola, and—most importantly—to look for ways to "reduc[e] frequency of low flows." JX-168 at 3, 195. That may not mean that "*all* additional flows . . . resulting from a decree" would make their way to Florida under the existing rules, as the Special Master believed was required. Report 48 (emphasis added). But the 2016 Biological Opinion makes it likely that a material portion of them would. It also underscores that just reducing the frequency and duration of low-flow periods, as the United States has admitted (at 16, 18, 28) a consumption cap would do, will materially benefit the Apalachicola.

Georgia argues that this Court should ignore the benefits of limiting the period in which the Corps is in drought operations (by delaying the onset of drought conditions and quickening the resumption of normal operations), because "Florida did not prove the extent to which drought operations would be shortened as a result of the relief requested or the level of benefits such marginal increased flows would afford." Resp. 54. But that is incorrect.

Neither Georgia nor, for that matter, the Special Master, acknowledged or responded to the powerful evidence showing that if a consumption cap had been in effect during the 2011-12 drought, it could have prevented the Corps from entering drought operations *at all*. FL Br. 48-49. Both common sense *and* the evidence thus establish that reducing the amount of water wastefully consumed in Georgia during crucial periods would increase the amount of water left over for the Apalachicola during those same periods. Allowing more water through in non-drought periods

also would fortify the Apalachicola and allow it to better withstand drought conditions.

Georgia's reliance on the results of ResSim modeling does not change that. As Florida has explained (at 50) and Georgia does not dispute, ResSim cannot accurately account for the Corps' practice of stockpiling more water during wet periods than the minimum its protocols require. That discretionary practice has created a "cushion" that the United States agrees is beneficial, and as the United States has recognized, a consumption cap would only *add* to the cushion, increasing the benefits in the form of shortened or eliminated drought operations. U.S. Br. 16, 18, 28.[3]

Accordingly, even if the Corps had not made clear in its ROD that it would adjust its operations in response to a decree, ample evidence showed at trial that a consumption cap likely would provide meaningful redress to Florida without any changes to the Corps' operating rules at all.

D. The Increased Flows To Florida Resulting From A Decree Would Materially Improve Conditions In The Apalachicola Region

Because the Special Master never considered that the Corps would actually change its operating rules in

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[3] Georgia claims (at 47 n.10) that ResSim's shortcomings are "canceled out" when comparing different scenarios. But ResSim's flaw for present purposes is that it treats materially different flow scenarios as though they are identical by ignoring the discretionary choices that the Corps retains over additional water. Comparisons do not eliminate that problem—they exacerbate it, by concealing the benefits that increased water would produce under the Corps' actual practices.

response to a decree, and concluded that Florida could not establish redressability unless the Corps' existing rules "guarantee" redress, he never considered the full beneficial effects that the additional flows created by a cap on Georgia's consumption on the Flint River would have on the Apalachicola if they *did* reach it. The evidence at trial, however, establishes that the increased water would have substantial beneficial effects.

Multiple biology and ecology experts testified that the Apalachicola River and Bay would substantially benefit from increased flows, especially as compared to a future in which Georgia would consume even more water (as it would, *see* Report 34). For the River, there is no question more water would benefit the system: a larger part of the floodplain would receive water through sloughs, the River ecology would stabilize, and harm to mussels, fish, and swamp trees would be reduced. *E.g.*, Allan PFD ¶¶ 65, 73-74 (Nov. 4, 2016), Dkt. No. 534; Tr. vol. 3, at 592:6-22, 596:17-598:1 (Allan); Tr. vol. 10, at 2629:7-15 (Kondolf). These findings are consistent with previous U.S. Fish and Wildlife Service and EPA findings. FX-599 at FL-ACF-02545883-84, -94.

The evidence of the benefits to the Bay—on which the Special Master's finding of harm focused (Report 31-32)—was likewise compelling. It showed that increased flows would prevent prolonged periods of very high salinity (as well as extreme temperatures and low dissolved oxygen episodes) that harm oysters and other aquatic life, improve food availability, and allow the Bay ecosystem to stabilize and move towards recovery. *E.g.*, Glibert PFD ¶ 5 (Nov. 4, 2016), Dkt. No. 541; Tr. vol. 7, at 1869:23-1870:12 (Glibert); Kimbro

PFD ¶¶ 7, 81-83 (Nov. 4, 2016), Dkt. No. 547; Tr. vol. 6, at 1603:16-1606:21 (Kimbro); White PFD ¶ 164 (Nov. 4, 2016), Dkt. No. 558. This Court previously recognized the direct relationship between increasing fresh-water flows and saving an oyster population in *New Jersey v. New York*, 283 U.S. 336, 345 (1931).

Georgia, meanwhile, grossly understates the benefits that a decree would produce for Florida. For example, Georgia describes (at 21) the roughly one-part-per-thousand reduction in salinity that increased flows would cause in the Bay as "*de minimis*" and claims that this would have "no ecological benefit." But the U.S. Fish and Wildlife Service found that the change would materially improve the survival rates of both oysters and juvenile Gulf sturgeon. JX-122, at 23-24; *see also* Tr. vol. 6, at 1570:24-1572:2 (Kimbro); Tr. vol. 7, at 1724:24-1725:14 (White); Tr. vol. 7, at 1869:23-1870:12, 1884:6-1885:7 (Glibert).[4] Georgia's attempt (at 21) to dismiss the increase in oyster population expected on a single oyster bar likewise ignores the evidence that other major oyster bars located closer to the river mouth would experience much larger benefits. *See* Tr. vol. 7, at 1724:24-1725:14 (White); Tr. vol. 6, at 1570:24-1572:2 (Kimbro).

The record also refutes Georgia's claim (at 17) that its total consumptive water use in the ACF Basin "has never reached a monthly average of 2,000 cfs," and that a consumption cap therefore could not produce

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[4] Georgia speaks of the incremental changes in salinity only in absolute terms. As a comparative figure, however, that change is significant: In some key areas of the Bay, for example, salinities are normally between 0-5 parts-per-thousand. Tr. vol. 7, at 1870:2-5 (Glibert).

sufficient water to provide benefits in Florida. The evidence at trial showed that Georgia has vastly understated the extent of its consumption. *See* Hornberger PFD ¶¶ 3, 50-53 & Tables 1 & 2, 71, 76-77, 80-95 (Nov. 4, 2016), Dkt. No. 546 (finding significantly higher consumption levels using other data and modeling); Lettenmaier PFD ¶¶ 39-43 (Nov. 4, 2016), Dkt. No. 550 (similar).

In short, the evidence clearly showed that the Apalachicola would see meaningful benefits from increased flows of the magnitude that a reasonable consumption cap would be likely to generate. The Special Master never made any contrary findings. Under his redressability standard, the absence of a "guarantee" that the additional water would reach the Apalachicola simply ended the inquiry.

III. DISMISSING THIS ACTION WOULD BE GROSSLY INEQUITABLE

Dismissing this suit also would be directly at odds with the equitable principles that govern equitable apportionment actions. FL Br. 52-54.

After the trial, the Special Master concluded that:

- "There is little question that Florida has suffered harm from decreased flows in the River." Report 31.
- That includes an "unprecedented collapse of its oyster fisheries," which "has greatly harmed the oystermen of the Apalachicola." *Id.* at 31-32.[5]

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[5] While Georgia tries to trivialize Florida's interest in protecting its oyster fisheries—and those that fish them—this Court has already recognized that interest as sufficiently weighty to support an equitable apportionment. *New Jersey*, 283 U.S. at

- Meantime, "Georgia's upstream agricultural water use has been—and continues to be—largely unrestrained." *Id.*
- Despite its "sharp increase in water use [since 1970], Georgia has taken few measures to limit consumptive water use for agricultural irrigation." *Id.* at 33.
- "Even the exceedingly modest measures Georgia has taken have proven remarkably ineffective." *Id.*
- And Georgia's mindset is simply that its "agricultural water use should be subject to no limitations, regardless of the long-term consequences for the Basin." *Id.* at 34.

Those conclusions are not only overwhelmingly supported by the evidence, but Georgia waived any challenge to them by declining to file exceptions.

Georgia does not dispute the time-honored principle that "equity will not suffer a wrong without a remedy." *See* FL Br. 53 (citing authorities). Instead, it just argues that "[a] court of equity is not called upon to do a vain thing." Resp. 57 (quoting *Foster v. Mansfield*, 146 U.S. 88, 101 (1892)). But *Foster* and like cases involved situations where redress is *impossible*. *See Foster*, 146 U.S. at 102 (explaining that person bringing suit "could not *possibly* obtain a benefit from such action" (emphasis added)). That is by no means the case here. As discussed, not only is redress undeniably *possible* if this Court enters the requested decree, but, as Florida has explained, it is, at the least, *likely*. There is nothing "vain" about ordering relief here.

345; *see Idaho II*, 462 U.S. at 1030-31 (O'Connor, J., joined by Brennan and Stevens, JJ., dissenting).

Georgia points to no equitable principle that would deny relief in these circumstances (and there is none). Indeed, as Justice O'Connor observed in *Colorado I*, even the "[p]rotection of existing economies does not require that users be permitted to continue in unreasonably wasteful or inefficient practices." 459 U.S. at 195 (O'Connor, J., concurring in the judgment). That is even more true in riparian States like Georgia and Florida, which give less weight to established uses than prior appropriation States like Colorado and New Mexico. *See id.* at 179 n.4. And there is absolutely no reason to dismiss this action and thereby allow Georgia to continue to engage in what the Special Master himself recognized (Report 32-34) is "wasteful or inefficient" agricultural consumption along the Flint River.

If this Court dismisses this action, Georgia's wasteful consumption will continue (*see id.* at 34), and Florida's harms will persist, if not worsen. That is the last thing that equity would allow where, as here, relief is not only possible but, indeed, likely.

CONCLUSION

The Court should decline to adopt the Special Master's recommendation and return the case to the Special Master for further proceedings.

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v.

STATE OF GEORGIA,

Defendant.

STATE OF FLORIDA'S REPLY IN SUPPORT OF ITS MOTION FOR LEAVE TO FILE A COMPLAINT

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INTRODUCTION

For decades, Georgia has voraciously consumed the shared waters of the Apalachicola-Chattahoochee-Flint ("ACF") Basin without legal constraint. The Apalachicola River has suffered, and an Apalachicola Bay fishery has collapsed – all while Georgia increased consumption, refused to negotiate in good faith, and deployed dilatory legal tactics. Throughout, Georgia always maintained that litigation involving the U.S. Army Corps of Engineers ("Corps") could have no effect on the States' water rights and that this Court was the only appropriate forum to determine those rights. Now faced with an original action, but still seeking delay, Georgia has reversed course and argues this Court should await Corps operational updates before considering Florida's claim. *See* Opposition at 18. But while the Corps can allocate storage in its reservoirs, it cannot adjudicate underlying rights to use that water, and it cannot order Georgia to reduce its consumption. Thus, the Corps cannot address the "same issue" presented by Florida's Complaint. Opposition at 1. Moreover, an equitable apportionment will not interfere with Corps operations.

Georgia also contends Florida has alleged no injury or causation sufficient to support this Court's jurisdiction. Asserting the equities of the Apalachicola region cannot match the dignity ostensibly represented by the City of Atlanta, Georgia argues Florida's injuries are insufficiently serious to warrant this Court's attention. But Florida's case is well pled, and

Georgia's purported factual disputes can only be resolved through adjudication on the merits.

This is the Court to resolve the dispute, and now is the time. Florida has waited long enough.

ARGUMENT

I. THIS IS THE PROPER FORUM AND THE DISPUTE IS RIPE.

Georgia claims because "[n]o water enters the Apalachicola River . . . without passing through the Corps' Woodruff Dam" at the state line, Opposition at 2, the Corps determines how much water Florida receives. Therefore, Georgia argues, the Court should await future Corps decisions before acting. Opposition at 3. This argument ignores not only the clear distinction between impacts from consumption and impacts from Corps operations but also Georgia's own acknowledgements that only this Court can resolve this dispute.

A. As Georgia Has Long Acknowledged, Only an Equitable Apportionment Can Resolve this Dispute.

Although it now conflates the issues of reservoir allocation (which the Corps determines) and the States' underlying water rights (which the Corps cannot determine), Georgia has consistently

acknowledged the two issues are distinct. In 2000, Georgia sued to force the Corps to reallocate Lake Lanier's storage capacity to address municipal and industrial water uses in and around Atlanta. Georgia opposed Florida's intervention, characterizing Florida's interest as "an interest in how much water flows into Florida hundreds of miles downstream," and arguing it was "well settled that states may enforce [such] claims . . . only through a claim for 'equitable apportionment'" in the Supreme Court. Brief of Appellee the State of Georgia at 9, *Georgia v. U.S. Army Corps of Eng'rs* (11th Cir. 2002) (No. 02-10135D). Georgia claimed the case addressed only "[w]hether or not Georgia obtains additional water supply [storage space] from Lake Lanier," *id.*, and could have no effect on Florida's right to water flows at the state line:

> [T]he outcome of this litigation will not affect Georgia's obligation to deliver to Florida its equitable share of the water [of the Chattahoochee River]. The outcome of the litigation may make it easier for Georgia to deliver to Florida its equitable share or harder to deliver to Florida its equitable share, but it will not affect the amount of water Georgia is obligated to deliver to Florida at all.

Id. at 17.

In 2008, while seeking this Court's review of the decision in *Southeastern Fed. Power Customers, Inc. v. Geren*, 514 F.3d 1316 (D.C. Cir. 2008), Georgia again drew a clear distinction between an action

addressing the Corps' operation of the reservoir system, and one seeking to apportion the waters of the ACF Basin: "How the waters of the ACF should be apportioned between the three states is a question that only this Court, and not the lower courts, can answer in the exercise of its original and exclusive jurisdiction." Petition for Writ of Certiorari at 20, n.14, *Georgia v. Florida*, 555 U.S. 1097 (2009) (No. 08-199). Indeed, Georgia emphasized "whether 'diminished flows' are causing cognizable injuries to Florida's . . . right to an equitable share of water is an issue that only this Court can decide." *Id.*

Yet again, in 2012, in opposing Florida's Petition for Certiorari to the Eleventh Circuit, Georgia asserted the litigation involved issues distinct from the allocation of underlying water rights. The Eleventh Circuit's decision involved the Corps' authority to undertake the very administrative process that Georgia now argues should delay this Court's exercise of jurisdiction. Georgia claimed nothing in that decision "authorizes Georgia to consume more than its fair share of water or precludes Alabama and Florida from bringing an equitable apportionment action to vindicate any rights they may claim to have in the Chattahoochee." Brief in Opposition for the Georgia Respondents at 32-3, *Florida v. Georgia*, 133 S.Ct. 25 (2012) (No. 11-999); *see also id.* ("The Eleventh Circuit's ruling will potentially make it easier for Georgia to utilize the water to which it is entitled, but Florida and Alabama would have no cause for complaint

unless and until Georgia consumed more than its share of the river.").

Now, Georgia characterizes its prior positions as a concession that Florida could bring an equitable action at *some* point, but not before the Corps' process concludes. *See* Opposition at 25 n.14. This contradicts the distinction Georgia made between equitable apportionment and the very same Corps process. Moreover, Georgia undermines even this limited concession by arguing Florida might have no equitable apportionment claim because "the broad scope of the thicket of federal environmental and natural resource statutes" addresses some (but not all) of Florida's injuries. *Id.* at 25. Although unwilling to state it expressly, Georgia suggests that by enacting certain federal statutes, Congress has displaced federal common law regarding equitable apportionment. But the cited cases, *Milwaukee v. Illinois*, 451 U.S. 304 (1981) and *Arizona v. California*, 373 U.S. 546 (1963), belie Georgia's argument. In *Milwaukee*, the Court rejected application of federal common law unless "Congress has not spoken to a particular issue." *Milwaukee*, 451 U.S. at 313. The Court cited *Arizona* as an example where Congress *had* spoken by "exercis[ing] its constitutional power over waters" and addressing the question through a statutory apportionment. *Id.* at 314-15 (quoting *Arizona*, 373 U.S. at 565-66). Neither the Corps' processes nor the laws Georgia cites, *see* Opposition at 21, present a remotely comparable situation. Congress has not displaced this Court's longstanding jurisprudence

regarding Florida's right to an equitable share of the upstream water. *Cf. Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017 (1983) (approving use of equitable apportionment in era after passage of federal environmental and natural resource laws).

For more than a decade, Georgia correctly articulated the fundamental distinction between proceedings involving Corps reservoir operations and an equitable apportionment action. Georgia should not now be heard to argue this Court is unavailable to Florida because the Corps continues to evaluate those reservoir operations.

B. The ACF River Basin Master Manual Cannot Resolve this Dispute Because the Corps Does Not Adjudicate Water Rights.

The Corps' updates to its ACF Basin Master Water Control Manual ("Master Manual") will not quantify the States' rights to consume water. Indeed, the Corps has long disclaimed authority to define the States' respective water rights through its Master Manual. In 2005, days before his Senate confirmation as Assistant Secretary of the Army (Civil Works), J.P. Woodley wrote to Alabama Senator Jeff Sessions that updates to water-control plans in the ACF Basin could only affect existing water supply management and were:

> [N]ot intended to address or resolve the issues related to water supply for North Georgia or resolve the water rights issues among the States. *The Corps has no authority to grant water rights or to allocate water among several states*. These Water Control Plans are descriptive guides of current operations and conditions for managing water flows and storage, and not a prescription for allocating water supply. Further, *these updated Water Control Plans will not allocate or reallocate water rights* within the . . . ACF river basin[ ].

Letter from J.P. Woodley to Sen. Jeff Sessions (April 25, 2005) (emphasis supplied). Similarly, Corps representatives explained to Congress just last summer: "The Corps does not have the authority to mandate water conservation measures on the state of Georgia. Allocation of waters for consumptive use is a responsibility of the States." *Oversight of Army Corps of Engineers Water Management in the Apalachicola-Chattahoochee-Flint (ACF) and the Alabama-Coosa-Tallapoosa (ACT) River Systems: Hearing Before the S. Comm. on Environment & Public Works*, 113th Cong. (2013) (Written Responses to Questions for the Record Submitted by Sen. Jeff Sessions (July 22, 2013) (Response to Question 29)) (hereinafter Corps Congressional Responses).

The Solicitor General has articulated the same distinction between the Corps' administrative process and the equitable apportionment Florida now seeks. In opposing Florida's Petition for Certiorari following the Eleventh Circuit's 2011 decision regarding the

Corps' authority to reallocate storage in Lake Lanier, the Solicitor General explained that the Corps' process will never resolve the fundamental question of apportionment:

> Reviewing *this* action, which does not present underlying issues that would be the subject of an original action, would be unlikely to move the overall dispute towards resolution. The Corps does not own the water in the ACF basin. If Florida and Alabama believe that Georgia is using, or storing, more than the equitable share of the waters of the ACF basin to which it is entitled, then their remedy is to pursue a new interstate compact or to seek leave to file an original action in this Court to resolve that issue.

Brief for the Federal Respondents in Opposition at 30, *Florida v. Georgia*, 133 S.Ct. 25 (2012) (No. 11-999).

Florida's Complaint is not about how water flows out of Corps reservoirs; it is about how Georgia's overconsumption leaves less water available to satisfy Florida's needs. Nothing the Corps can do in the context of the Master Manual will address that consumption.[1]

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[1] Conversely, an equitable apportionment will not interfere with the Corps' operational authorities because the Corps remains obligated to observe its statutory duties notwithstanding the level of upstream consumption this Court might approve. This is why the United States is not indispensable to this litigation. The water at issue here is naturally occurring water, unlike the federal project water developed by the U.S. Bureau of

(Continued on following page)

C. Georgia Ignores its Consumption, Which Has Adverse Impacts Distinct from Corps Operations.

Georgia implies the Corps controls all aspects of river flow in the ACF Basin and that Georgia consumption is irrelevant given this supervening management. This is simply incorrect. Indeed, the Corps itself has repeatedly distinguished impacts attributable to its operations from impacts attributable to Georgia's consumption. In a series of biological impact analyses, the Corps has explained how water withdrawals associated with urban and agricultural uses have impacted the flow regime of the Apalachicola River. The Corps made clear that some of the differences in alternative flows regimes "are due to consumptive water uses in the basin rather than Corps reservoir operations" which "impacts basin inflow into the Corps projects." U.S. Army Corps of Engineers, Mobile Dist., BIOLOGICAL ASSESSMENT,

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Reclamation involved in *Arizona v. California*, 298 U.S. 558 (1936). The *Arizona* Court found an apportionment "could not be accomplished without ascertaining the rights of the United States to dispose of that water," *id.* at 571, and without interpreting federal rights and obligations arising under a prior interstate Compact, international treaty obligations, and the federal reserved water rights doctrine. Quantification of such federal rights and obligations is not an issue here and allocating the States' relative rights can only be accomplished in an equitable apportionment action because, unlike the law of the Colorado River, Congress has not created "its own comprehensive scheme for the apportionment of" the ACF Basin waters. *Contrast Arizona*, 373 U.S. at 564-65; *see also supra* at 3.

MODIFICATIONS TO THE INTERIM OPERATING PLAN FOR JIM WOODRUFF DAM AND THE ASSOCIATED RELEASES TO THE APALACHICOLA RIVER at 10 (Feb. 15, 2007), *available at* http://www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/acf_info/docs/RPM3_FinalBiologicalAssessment_02-16-07.pdf.

Last summer, the Corps acknowledged there have been more periods of low flows in the ACF Basin over the last decade than in previous decades, and concluded that "it is likely that increased consumption, including irrigation on the Flint River, has contributed to the frequency and duration of low flows on the Apalachicola River." Corps Congressional Responses, Response to Question 28. As the Corps previously observed, "an increase in net consumptive depletions to water supply are reasonably certain to occur based on increased municipal and industrial (M&I) demands in the ACF Basin (particularly in the upper Basin) and agricultural withdrawals," and this increase in consumption, "could adversely affect habitat in the Apalachicola River and Apalachicola Bay by further altering the natural flow regime." U.S. Army Corps of Engineers, Mobile Dist., Planning & Envtl. Div., ENVIRONMENTAL ASSESSMENT, INTERIM OPERATIONS PLAN FOR SUPPORT OF ENDANGERED AND THREATENED SPECIES, JIM WOODRUFF DAM, GADSDEN AND JACKSON COUNTIES, FLORIDA AND DECATUR COUNTY, GEORGIA at EA-47 (Oct. 2, 2006), *available at* http://www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/acf_info/docs/IOPFinalEA.pdf.

There is simply no scientific dispute that upstream uses are depleting flows in the ACF Basin. *See generally* Florida's Brief at 16-20. Georgia minimizes this harm, arguing, for example, that the Atlanta region estimates it will return about 78% of withdrawn water to the Chattahoochee River. Opposition at 12-13. But Georgia ignores entirely its consumption on the Flint River, and, at any rate, Georgia's estimates of return flows on the Chattahoochee and their downstream impacts are hotly debated. Indeed, one estimate shows that during the summer months of dry years, upstream consumption is responsible for depleting *more than 50% of the overall River flow of 5,000 cfs*. U.S. Fish & Wildlife Serv., Panama City Field Office, BIOLOGICAL OPINION ON THE U.S. ARMY CORPS OF ENGINEERS, MOBILE DISTRICT, REVISED INTERIM OPERATING PLAN FOR JIM WOODRUFF DAM AND THE ASSOCIATED RELEASES TO THE APALACHICOLA RIVER at 139 (Table 4.1.A) (May 22, 2012). The precise amount of upstream depletions and downstream impacts cannot be quantified until the completion of discovery. But Florida has pled sufficient facts to entitle it to prove its claims.

II. FLORIDA PROPERLY PLED HARM OF A SERIOUS MAGNITUDE

In determining whether to exercise original jurisdiction, this Court focuses on "the nature of the interest of the complaining State," and in particular the "seriousness and dignity" of the claim asserted. *South Carolina v. North Carolina*, 558 U.S. 256, 277 (2010) (quoting *Mississippi v. Louisiana*, 506 U.S. 73, 77 (1992)). As detailed in Florida's Complaint, no issue is of greater import to the people of the ACF Basin, and the Apalachicola region in particular, than the waters that sustain them.

Under the Federal Rules of Civil Procedure, which provide guidance in this case, a Complaint need only provide a "short and plain statement of the claim showing that the pleader is entitled to relief." Fed. R. Civ. P. 8(a)(2). The Court must accept as true all well-pled factual allegations contained in the Complaint, and the Complaint must state a claim that is plausible on its face. *Ashcroft v. Iqbal*, 556 U.S. 662, 678-79 (2009); *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 555 (2007). Florida's Complaint contains sufficient factual content to "allow[] the Court to draw the reasonable inference" that Georgia is responsible for Florida's harm. *Iqbal*, 556 U.S. at 678. Florida has pled detailed facts regarding the low flows in the Apalachicola and the resulting harm, *e.g.*, Complt. ¶¶ 55-56, 58, Georgia's overconsumption, *e.g.*, *id.* ¶¶ 48-50, and the causal relationship between the two, *e.g.*, *id.* ¶¶ 53-54, 57.

Georgia's Opposition simply ignores that the Complaint's factual allegations must be accepted as true and invites the Court to prejudge disputed facts. Moreover, Georgia asserts Florida must ultimately prove injury by clear and convincing evidence, downplaying Florida's allegations of injury. Opposition at 15, 28, 31 n.19. But Georgia fails to cite a single case establishing that an evidentiary standard alters the pleading standard. *Cf. Swierkiewicz v. Sorema N.A.*, 534 U.S. 506, 510 (2002) (reversing dismissal of employment discrimination complaint based on failure to allege elements for prima facie case because "[t]he prima facie case under *McDonnell Douglas* [*Corp. v. Green*, 411 U.S. 792 (1973)] is an evidentiary standard, not a pleading requirement" (cited in *Twombly*, 550 U.S. at 569-70)).

Florida has alleged serious injury to its economy, its environment, and its people – not simply to threatened or endangered species as Georgia suggests. Florida has alleged the same types of injuries that have justified the exercise of this Court's jurisdiction in past proceedings. *See, e.g., Nebraska v. Wyoming,* 515 U.S. 1 (1995); *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017 (1983); *New Jersey v. New York*, 283 U.S. 336 (1931).

CONCLUSION

Georgia alone is responsible for its unrelenting consumption of interstate waters and this Court is the only forum in which Florida may seek redress. This Court should, therefore, grant Florida leave to file its Complaint and appoint a Special Master to conduct further proceedings.

Respectfully submitted,

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IN THE

Supreme Court of the United States

STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

On Exceptions To The Report Of The Special Master

GEORGIA'S REPLY TO FLORIDA'S EXCEPTIONS TO THE REPORT OF THE SPECIAL MASTER

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INTRODUCTION

In this equitable apportionment action, Florida asks the Court to impose dramatic and costly reductions in Georgia's upstream water use—cuts that threaten the water supply of 5 million people in metropolitan Atlanta and risk crippling a multi-billion dollar agricultural sector in southwest Georgia. To justify such draconian restrictions, Florida was required to show, at the very least, that these potentially catastrophic cuts would yield some meaningful benefit to Florida. But after 18 months of discovery and a five-week trial, Florida could not prove that the water generated by its proposed reductions would actually flow across the state line during the drought periods when Florida claims to have suffered injury. After reviewing the evidence in detail, the Special Master found any benefit to Florida from its proposed cuts to be "uncertain and speculative." Report 48. It is thus no surprise that the Special Master recommended that this Court deny Florida's claim, which is precisely what this Court's precedents require.

At issue in this case is the water of the Apalachicola-Chattahoochee-Flint River Basin ("ACF Basin"), a network of rivers, dams, and reservoirs that begins in northern Georgia and ends in the Florida panhandle. Among the reservoirs and dams are five facilities owned and operated by the U.S. Army Corps of Engineers (the "Corps"), through which the Corps controls the timing and flow of water at the Georgia-Florida line. A panoply of federal statutes and regulations directs the Corps' management of ACF waters, particularly in periods of drought or low flows. In those conditions, the

Corps must balance available water resources to achieve multiple federally mandated purposes, including conserving water in its reservoirs and satisfying minimum state-line flows into Florida. Because the Corps, in effect, controls the spigot at the state line, it plays a critical role in managing water throughout the region. The United States, however, declined to waive sovereign immunity, and as a result it could not be joined as a party and cannot be bound by an order of the Court in this case.

From the outset of this case, Georgia has taken the position that the Court could not fashion adequate relief without the United States as a party. In an effort to avoid dismissal on this ground, Florida narrowly tailored its requested relief to focus solely on Georgia. Florida insisted that a consumption cap on Georgia alone would lead to an increase in water flow across the state line—*wholly irrespective of Corps operations*—sufficient to redress its alleged injuries. The Special Master allowed the case to proceed on that basis, but warned Florida that its approach was a "two edged sword." 6/19/15 Order 13 (Dkt. #128). "Having voluntarily narrowed its requested relief and shouldered the burden of proving that the requested relief is appropriate, it appears that Florida's claim will live or die based on whether Florida can show that a consumption cap is justified and will afford adequate relief." *Id.*

Florida failed to make that showing. Indeed, far from proving that it could obtain a meaningful increase in state-line flows during drought *without* an order changing Corps operations, the evidence showed just the opposite: any meaningful benefit to

Florida from a cap on Georgia's water use would be highly unlikely *because of* Corps operations. The United States, participating as *amicus curiae*, told the Special Master: "Apalachicola River flows would be very similar with or without a consumption cap" during droughts because additional water generated by a cap would be stored in upstream reservoirs by the Corps until those reservoirs refilled and would not be passed on to Florida. U.S. Post-Trial Br. 17-18 (Dkt. #631). That conclusion was fully supported by the trial record, which included extensive testimony, data, and expert analysis. The Special Master thus correctly found that "Florida has failed to show that a consumption cap will afford adequate relief." Report 69.

In reaching that conclusion, the Special Master correctly held Florida to the exacting burden of proof that this Court has imposed on states seeking to upend the status quo at the expense of a coequal sovereign. Unless Florida could "demonstrate[] by clear and convincing evidence that the benefits of the diversion [it sought] substantially outweigh[ed] the harm that might result," it could not prevail under this Court's decisions. *Colorado v. New Mexico*, 459 U.S. 176, 187 (1982) (*Colorado I*). It is thus wrong for Florida to claim that the Special Master applied some "unprecedented" legal standard. Exceptions 25. Relying on this Court's equitable apportionment cases, he appropriately required Florida to prove by clear and convincing evidence that its proposed consumption cap would generate a meaningful benefit to Florida that would effectively redress its alleged injuries. When he found that Florida had failed to meet its burden of proof on that score, he

recommended that relief be denied. That recommendation is fully supported by this Court's precedents. *See, e.g.*, *Washington v. Oregon*, 297 U.S. 517, 522-23 (1936); *Idaho ex rel. Evans v. Oregon*, 444 U.S. 380, 392 (1980) (*Idaho I*); *Colorado I*, 459 U.S. at 187.

Having failed to prove its case at trial, Florida mischaracterizes the record in an attempt to earn a do-over from this Court. Florida repeatedly claims, for example, that the Special Master required Florida to prove that complete redress was "guarantee[d]." Exceptions 29. But the Special Master applied no such standard. He instead asked whether Florida had proven its asserted benefit by "clear and convincing evidence." Report 3, 28, 70. Florida also claims that the Special Master "*found* both injury and inequitable conduct," Exceptions 2 (emphasis added), when the Special Master expressly declined to reach those issues and limited his findings to the "single, discrete" issue of redressability, Report 30. And Florida selectively quotes from a recent Corps document to argue that relief is likely, omitting key passages in which the Corps made clear that it is not a party to this case, that its operations are not at issue, and that it would merely review and consider any final order. Such distortions of the record below only underscore Florida's fundamental failure of proof.

At bottom, Florida's brief amounts to a plea for this Court to cut Georgia's water use *regardless* of whether those cuts would actually redress any injury. But an equitable apportionment is not an exercise in futility. This Court will not afford relief "for no other or better purpose than to vindicate a

barren right." *Washington*, 297 U.S. at 523. That is all the more true given that Florida's proposed consumption cap would impose hundreds of millions of dollars of costs on Georgia annually, upsetting long-existing uses on which millions of Georgians rely. Having intentionally narrowed its requested relief to exclude the Corps, Florida must now shoulder the consequences of that choice. Because Florida failed to prove by clear and convincing evidence that the relief requested would—wholly independent of the Corps—redress its alleged injuries, this Court should accept the recommendation of the Special Master.

STATEMENT OF THE CASE

A. Background

The ACF Basin consists of a network of rivers, dams, and reservoirs that the Corps has described as a "highly regulated system." GX-544 (Corps, *ACF Final Updated Scoping Report* (Mar. 2013)) at 2. The Chattahoochee River rises in northern Georgia and flows south to the Florida border. Report 4. Along the way, it passes through five dams operated by the Corps, three of which create reservoirs that have substantial capacity to store water from the wet winter and early spring for release during the drier summer and fall. GX-544 at 4-8. Buford Dam is the northernmost of the Corps' five dams and is located about 40 miles north of Atlanta. The reservoir created by Buford Dam is Lake Lanier, the largest of the five reservoirs managed by the Corps in the ACF Basin. The Corps has long operated Buford Dam and Lake Lanier in a manner that provides primary water supply for the Atlanta metropolitan region.

Report 36; Mayer Direct ¶ 22 (Dkt. #567). Further downstream, the Chattahoochee passes through the West Point, Walter F. George, George W. Andrews, and Jim Woodruff Dams. Report 6. Woodruff Dam, located on the Georgia-Florida border, is the southernmost of the Corps' five dams in the ACF Basin. *Id.*

The Flint River originates just south of Atlanta. Along with a system of highly productive groundwater aquifers, the Flint River serves as a source of irrigation for southwestern Georgia's fertile agricultural region, which generates at least four billion dollars annually in farm-based revenue. Report 5; Stavins Direct ¶ 17 (Dkt. #572). The Flint River joins the Chattahoochee River at Lake Seminole, the reservoir created by Woodruff Dam. The Apalachicola River begins on the southern side of Woodruff Dam and flows exclusively through sparsely populated portions of the Florida panhandle, terminating at the Apalachicola Bay. Report 5.

Flows from Georgia into the Apalachicola River "reflect the downstream end-result of system-wide operations" by the Corps. JX-72 (U.S. Fish and Wildlife Service, *Biological Opinion*) at 7. No water can flow into the Apalachicola River from *either* the Chattahoochee River *or* the Flint River without passing through the Corps' reservoir system, including Woodruff Dam. Because Lake Seminole does not have significant storage capacity, the Corps regulates flows into the Apalachicola River during times of drought or low flows by scheduling releases from the federal dams further upstream. By coordinating those upstream releases, the Corps

ensures that Apalachicola River flows meet certain minimums. JX-124 (Corps, *Draft Environmental Impact Statement* (Oct. 2015)) at 2-65. Although the Corps does not operate any dams on the Flint River upstream of Woodruff Dam, the Corps takes Flint River flows into account in determining how much water to release from upstream dams on the Chattahoochee River. *Id.* at 4-24 (inflows to Lake Seminole from the Flint River are calculated as part of total "basin inflow," one of the three key factors controlling releases from Woodruff Dam).

Congress has specified the manner in which the Corps must operate the federal dams and reservoirs in the ACF Basin. In particular, the Corps is statutorily required to regulate lake levels and water flows in the Basin to serve a number of federal statutory purposes, including water supply, hydroelectric power generation, flood control, recreation, navigation, fish-and-wildlife conservation, and water quality.[1] When balancing these sometimes-competing federal objectives, the Corps "does not prioritize project purposes with the exception of flood risk management during a flood event." JX-124 at 4-6. Rather "[a]ll project purposes ... are considered equally when making water management decisions." *Id.* As the Corps explained in a March 2013 report:

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[1] *See, e.g.* H.R. Doc. No. 76-342 (1939); River and Harbor Act of 1945, Pub. L. No. 79-14, § 2, 59 Stat. 10, 17; River and Harbor Act of 1946, Pub. L. No. 79-525, § 1, 60 Stat. 634, 635; Water Supply Act of 1958, 43 U.S.C. § 390b; Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661-667e; Flood Control Act of 1962, Pub. L. No. 87- 874, § 203, 76 Stat. 1173, 1182.

> The complex hydrology and varied uses of the ACF system require that the [Corps] operate the system in a balanced operation in an attempt to meet all the authorized purposes while continuously monitoring the total system's water availability to ensure that minimum project purposes can be achieved during critical drought periods.

GX-544 at 18.

In managing water resources in the ACF Basin to serve these purposes, the Corps uses a Master Water Control Manual. That Manual—recently updated by the Corps following a nearly decade-long, multi-agency administrative review process—sets forth the Corps' considered views on how to operate its dams and reservoirs in a way that "best balances the authorized project purposes," JX-124 at ES-16, and "best serves the overall public interest," Corps, *ACF Signed Record of Decision*, at 1 (Mar. 30, 2017) (*Record of Decision*), http://bit.ly/2sSRdp6.[2] In general, the Corps calculates how much water to release from its reservoirs based on the time of year, the total combined volume of usable water in its reservoirs ("composite conservation storage"), and the amount of water that would flow by Woodruff Dam if the reservoirs were kept at their current storage levels

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[2] The Corps released its current Manual in December 2016, after the trial in this case but before the Special Master's Report. The Special Master found—and Florida does not dispute—that the new Manual did not result in "any material changes to Corps operations from the operations described by the parties at trial." Report 35-36 n.29.

("basin inflow"). Report 42-43, 45-46; U.S. Post-Trial Br. 5-12.

Of particular relevance here, the Manual establishes a series of minimum flow rates for water passing through Woodruff Dam and into Florida. JX-124 at 5-35. These minimum flow rates ensure that water flowing into the Apalachicola River generally does not fall below 5,000 cubic feet per second ("cfs"), with the Corps supplementing natural basin flows with water from its reservoirs when necessary to maintain that minimum.[3] Report 45 n.36, 48. The 5,000 cfs minimum applies during "drought operations," which are triggered when reservoir storage levels drop below a certain threshold, and "low-flow conditions," which occur any time basin inflow drops below 5,000 cfs. *Id.*

During drought operations, "any [flows] above 5,000 cfs can be stored" by the Corps to promote recovery of reservoir storage levels. U.S. Post-Trial Br. 17. Once drought operations are triggered, the Corps continues those operations until the reservoirs recover to almost full capacity. *Id.* at 9-10. The purpose of drought operations (and the 5,000 cfs minimum flow that applies during those operations) is to "conserve storage in [Corps] reservoirs," JX-124 at ES-8, while also "ensur[ing] that minimum project purposes can be achieved during critical drought periods," GX-544 at 18.

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[3] On rare occasions, the 5,000 cfs minimum is lowered to 4,500 cfs. *See* Report 44; JX-124 at 6-79.

B. Procedural History

For more than two decades, Florida blamed the Corps for the alleged ecological harms that it now attempts to pin on Georgia. In a series of cases, Florida claimed that the Corps' practice of retaining water in upstream reservoirs created "low-flow conditions" that "le[d] to devastating consequences for the ecology and species of the Apalachicola River and Bay." GX-402 at 29 (Fla. Cert. Petition, *In re MDL-1824 Tri-State Water Rights Litig.* (U.S. No. 11-999) (filed Feb. 1, 2012)); *see also* GX-1281 ¶ 10 (Suppl. Decl. of T. Hoehn, *Alabama v. U.S. Army Corps*, No. cv-90-be-1331 (N.D. Ala. Apr. 10, 2006)) (Florida official stating that "the Corps has been retaining water in the upstream reservoirs, primarily Lake Lanier, while reducing releases to the Apalachicola River"). Florida also claimed that Corps activities on the Apalachicola River (such as dredging and dam construction) caused "changes in River morphology and hydrology" that "reduce[d] dramatically the area of available habitat inundated." GX-1283 ¶ 65 (Compl., *Florida v. U.S. Fish & Wildlife Serv.*, No. 4:06-cv-410 (N.D. Fla. Sept. 6, 2006), ECF No. 1-2).

Although Florida for years argued that its alleged ecological injuries were caused by the Corps and could be redressed by a judicial order requiring the Corps to release more water from its upstream reservoirs, it was ultimately unsuccessful in its litigation against the Corps. Florida thereafter brought this equitable apportionment action, blaming Georgia for the same alleged injuries for which it previously had blamed the Corps.

At the outset of the case, Georgia filed a motion to dismiss under Federal Rule of Civil Procedure 12(b)(7), challenging Florida's ability to proceed without the United States being joined as a party. Dkt. #48. Florida resisted, arguing that the United States was not a required party because Florida could obtain meaningful redress by capping Georgia's water consumption without any changes to Corps operations. Dkt. #75. Florida acknowledged that it bore the burden of proving that its injuries could be redressed without the Corps as a party, and told the Special Master that "if you conclude after a trial that caps on consumption will not redress Florida's harm, then Florida will not have proved its case." 6/2/15 Hr'g Tr. 29:21-30:5 (Dkt. #125). The Special Master allowed the case to proceed, but warned that Florida's claims would "live or die based on whether Florida can show that a consumption cap is justified and will afford adequate relief." 6/19/15 Order 13.

Florida had more than 18 months of discovery to assemble evidence to try to meet its burden of proof. During that time, the parties produced 7.2 million pages of documents, served 130 third-party subpoenas, submitted *Touhy* requests on 7 federal agencies, conducted 69 fact depositions, issued more than 30 expert reports, and conducted 29 expert depositions. The issue of whether a consumption cap would afford Florida adequate relief was a prominent and recurring topic throughout discovery. The Corps produced documents and provided its views on Corps operations in a post-trial *amicus* brief. Further, both parties had access to the extensive public record of official Corps statements concerning operations in the ACF Basin. Florida deposed Georgia employees

knowledgeable about Corps operations as well as numerous third parties who study Corps operations. Florida also retained three experts to opine on how the Corps manages the ACF system. For its part, Georgia relied on testimony from a retained expert on Corps reservoir operations and the State's chief hydrologist, whose job requires a thorough understanding of Corps operations.

1. The Trial

Following discovery, the Special Master held a five-week bench trial. The parties presented evidence on a multitude of issues, including Georgia's use of water in the ACF Basin; the nature, severity, and causes of Florida's alleged injuries; the burdens a consumption cap would impose on Georgia; and whether a consumption cap would provide adequate relief to Florida in light of Corps operations.

The Special Master expressly limited his recommendation to the last issue—effective redress—and only that issue is germane to the dispute before the Court. Florida, however, devotes a large portion of its brief to discussing other matters, even going so far as to claim that the Special Master "found" in Florida's favor on issues such as "injury and inequitable conduct." Exceptions 2; *see also id.* at 4-17. Because Florida has addressed those irrelevant matters, Georgia is compelled to respond, if only to briefly highlight the substantial amount of evidence that Florida omitted. These issues, however, should not distract from the primary issue here—namely, that Florida failed to

prove the availability of effective relief in the absence of the Corps as a party.

(A) Georgia's Use Of Water In The ACF Basin Is Equitable

Georgia uses ACF waters for highly beneficial purposes. Among other things, the Georgia portion of the ACF Basin provides the primary water supply for more than 5 million people and supports a multi-billion dollar agricultural industry. Stavins Direct ¶¶ 14-20; Mayer Direct ¶ 22; Kirkpatrick Direct ¶¶ 9, 11 (Dkt. #564). Georgia is home to over 90% of the population, employment, and economic activity in the ACF Basin. Stavins Direct ¶¶ 30, 33; Mayer Direct ¶¶ 27-28; GX-863, Att. A at 2. Florida, by contrast, accounts for only 1.8% of the population, 1.2% of employment, and less than 1% of economic activity in the Basin. Stavins Direct ¶ 30.[4]

Although it is home to the overwhelming majority of the Basin's population and economic activity,

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[4] Florida's extended critique of Georgia's agricultural irrigation practices, *see* Exceptions 14-17, is neither relevant to the issue decided by the Special Master nor accurate. Florida's own expert found that the great majority of Georgia farmers under-irrigate, applying less water than their crops require for maximum yield. Tr. 2822:23-2823:8 (Sunding). Georgia has invested millions of dollars in conservation measures to reduce agricultural water use. *See* Masters Direct ¶¶ 51-69 (Dkt. #566) (describing "substantial" investments in regional water planning and efficient irrigation practices); Cowie Direct ¶ 43 (Dkt. #562) (describing investment of nearly $30 million for regional water planning). Georgia also placed a moratorium on new irrigation permits from 1999 to 2006, and again from 2012 to the present, in areas where irrigation can impact streamflow. *See* Reheis Direct ¶ 47 (Dkt. #571); Tr. 3060:24-3061:7 (Turner).

Geogia consumes only a small fraction of the water available in the ACF system. In most years, Georgia's consumptive water use accounts for less than 5% of total flow crossing the state line. Bedient Direct ¶ 95 (Dkt. #559). Even at times of peak water use—*i.e.*, during the drier May-September months—Georgia's consumptive use averages only around 8% of state-line flow. *Id.* ¶ 97. Thus, under almost all climatic conditions, Florida recieves over 90% of total surface water in the ACF Basin. And even during times of drought, the Corps guarantees flows to Florida of at least 5,000 cfs, Report 44—an amount Florida itself noted is "enough water both to supply approximately 19 million people and irrigate approximately four million acres of farmland." Dkt. #474 at 3.

(B) Florida Failed To Prove That Georgia's Water Use Caused Harm To The Apalachicola River And Bay

The evidence at trial also undermined Florida's attempts to blame Georgia's water use for alleged injuries to the Apalachicola River and Apalachicola Bay. With regard to the Apalachicola River, Florida argued that Georgia's water use harmed the ecosystem by reducing the amount of water escaping the banks of the river and moving into the floodplain. Prior to trial, however, the U.S. Fish and Wildlife Service issued a Biological Opinion pertaining to the Apalachicola River, which concluded that the two primary river species Florida alleged to have been harmed by Georgia were either stable or improving in population size. *See* JX-168 at 63 (sturgeon); *id.* at 119, 133 (mussels). Florida's own river ecology

expert, moreover, could not identify population reductions in any animal species in the river or floodplain. *See* Tr. 547:11-548:1 (Allan). And to the extent there has been any reduction in floodplain inundation on the Apalachicola River, the evidence conclusively showed that such reductions were caused not by Georgia's water use, but by changes in the physical characteristics of the river caused by dredging, the construction and operation of dams, and drought. GX-1335 at 10 (Florida's expert reporting that "[d]egradation of the river bed and channel widening of the river" caused by dam construction and dredging "has decreased connectivity to the floodplain and slough channels"); Tr. 166:1-4 (Hoehn) (admitting that Corps operations caused "clear impacts on the ACF species"); JX-124 at 2-7 to 2-9 (drought).

Similarly, the evidence at trial showed that any harm to the Apalachicola Bay ecosystem was not caused by Georgia. Florida blamed Georgia's water use for the 2012 collapse of the Apalachicola Bay oyster fishery. Before filing this case, however, Florida told the federal government that the oyster crash resulted from the confluence of "drought conditions" and "[h]arvesting pressures." JX-77 at 1-2. Testimony at trial confirmed that Florida (1) allowed unsustainable levels of oyster harvesting in the Bay in 2010 and 2011, JX-50 at 3, 4-5; (2) opened Apalachicola Bay to unrestricted harvesting and overfishing following the *Deepwater Horizon* oil spill, a step that Florida officials described as a "use it or lose it" policy, JX-77 at 8; (3) failed to restore oyster habitat while this overharvesting was occurring, Tr. 4397:18-4398:7 (Lipcius); and (4) failed to enforce

size and bag limits in the Bay, which led to substantial overharvesting of juvenile and undersized oysters, FX-412 at NOAA-3818; Tr. 1137:4-15 (Beaton). Indeed, Florida regulatory oversight was so lax that more oysters were harvested in 2011 and 2012 than in any of the prior 25 years. GX-1248; FX-839.[5]

The evidence also undermined Florida's claims of harm to the Bay ecosystem more broadly. Historical population data showed no harm to any of the non-oyster species prevalent in Apalachicola Bay, including numerous species of fish, crab, shrimp, and plants. Tr. 4234:18-4235:18 (Menzie). Florida's own expert, moreover, admitted that she had no "data or information indicating that any fish species in Apalachicola Bay has been negatively impacted by impaired food availability" as a result of low flows. Tr. 1852:7-11 (Glibert); Tr. 1850:6-12 (Glibert) (same for blue crab and white shrimp).

Significantly, Florida's evidence focused on alleged injury during dry or drought years only;

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[5] The Special Master stated that the evidence "tends to show" that the oyster collapse was caused by increased salinity in the Bay, which in turn was caused by low flows from the Apalachicola River. Report 32. Georgia strongly disagrees with that statement, which conflicts with the findings of University of Florida scientists. GX-789 at 6 ("We did not find correlations between Apalachicola River discharge measures ... and our estimated relative natural mortality rate ... or oyster recruitment rates[.]"). In any event, the Special Master did not go the next step and say that Georgia's water use—as opposed to drought, Corp operations, or other influences—was the *cause* of those low flows; to the contrary, he specifically reserved ruling on the question of causation. Report 34.

Florida presented no meaningful evidence that it was suffering injury during average or wet years. Tr. 2811:1-8 (Sunding). This is consistent with what Florida previously told another federal court: "[I]n years of at least average annual flows, the Apalachicola River's flows are more than adequate to ... sustain the significant biological processes on which the health of the River and Apalachicola Bay relies, and upstream consumption is not significant enough to interfere with those processes." Decl. of D. Barr ¶ 31, *In re Tri-State Water Rights Litig.*, 3:07-md-1-PAM-JRK, Dkt. #311-4 (Dec. 9, 2009).

(C) Florida's Proposed Consumption Cap Would Inflict Enormous Economic Burdens On Georgia

Notwithstanding its inability to tie Georgia's water use to its alleged injuries, Florida asked the Special Master to impose draconian restrictions on Georgia's consumption. Although Florida labeled this requested relief a "consumption cap," it would in fact require drastic cuts to Georgia's water use. For example, Florida proposed to cut Georgia's water use by an amount sufficient to generate an additional 2,000 cfs of streamflow in summer months, principally by cutting agricultural water use on the Flint River. Florida Post-Trial Br. 78 (Dkt. #630). That would be, quite literally, impossible. Georgia's *total* consumptive water use in the Basin has never reached a monthly average of 2,000 cfs, and has exceeded 1,400 cfs only during the most extreme drought months. Zeng Direct ¶¶ 5, 22-23 (Dkt. #574). Florida greatly overstates how much water could be generated from a consumption cap because its estimates of Georgia's water use, which purport to

show "exploding consumption" since the 1970s, *see* Exceptions 8-9, exaggerate the impact of Georgia's water use by as much as *10 times* its actual amount, Tr. 3308:1-14 (Zeng).

Setting aside the factual impossibility of Florida's proposed cap, the cuts Florida says are necessary to achieve an additional 2,000 cfs of streamflow would impose extraordinary costs on Georgia. Georgia's economic expert found that just one of those measures—reducing irrigation for row crops—would cost Georgia over $335 million in lost crop yields every year the reductions were implemented. Tr. 4512:20-4514:4 (Stavins). Those same cuts also would reduce state-wide economic activity in Georgia by another $322 million. Stavins Direct ¶ 90. Florida's own expert testified that generating just half of Florida's proposed remedy (1,000 cfs) would result in direct costs to Georgia of approximately $190 million every year the cuts were implemented. Tr. 2787:10-13 (Sunding). And notwithstanding these staggering costs, Florida even argued that Georgia should spend over a billion dollars on new urban wastewater infrastructure, Tr. 3551:9-3552:6 (Mayer), even though Georgia has already invested hundreds of millions of dollars to develop conservation programs that have substantially reduced consumptive use in the Atlanta region, Mayer Direct ¶¶ 36, 80-82.

(D) A Consumption Cap Would Not Provide Effective Relief

A significant focus of the trial was on whether a consumption cap on Georgia would result in more water flowing to Florida during drought operations,

when the Corps' operating plans call for conserving reservoir storage while requiring only a minimum flow of 5,000 cfs into Florida. Both States' experts ran simulations using ResSim—the Corps' official reservoir simulation model, which incorporates the operating rules from the Water Control Manual. Those simulations showed that "additional water entering the ACF Basin and resulting from Georgia's reduced consumptive use would not translate to any increase in flow at the state line during these critical low flow months, due to the manner in which the Corps operates its reservoirs." Bedient Direct ¶ 81; Tr. 1933:20-1935:23 (Hornberger) (Florida expert acknowledging that ResSim modeling showed that "a 50 percent reduction in Georgia's agricultural use ... would produce zero cfs of additional flow at the state line" for hundreds of days during drought). Those simulations were consistent with historical flow records, which show that Flint River flows can naturally fluctuate by as much as 2,000 cfs during drought (due to rainfall and other localized weather events) without any meaningful change in state-line flows. Tr. 3342:7-3343:19 (Zeng).

Testimony at trial explained why a consumption cap would not translate into increased state-line flows during drought operations and low-flow periods. The Water Control Manual instructs the Corps to conserve reservoir storage when water is scarce. Thus, if additional water enters the system during drought as a result of cuts to Georgia's water use, that additional water would not be passed through to Florida. Instead, the Corps would use that water to refill its reservoirs, while maintaining a roughly 5,000 cfs flow into Florida. That is true

even with respect to any streamflow that might be generated through cuts to water use on the Flint River. Although water generated by cuts on the Flint River cannot directly be captured and stored, the Corps would effectively place that water into storage by "offsetting" increased Flint River flows with decreased releases from upstream reservoirs on the Chattahoochee of roughly the same magnitude. Tr. 3340:12-3343:19 (Zeng). "As a result, during drought or low-flow periods, increases in Flint River flow would generally not lead to any increases in state-line flow into Florida." Bedient Direct, ¶ 47; *see also* Tr. 3341:24-3342:6 (Zeng).

The United States confirmed that, in periods of drought or low flows, a consumption cap would not generate additional state-line flow. In its post-trial *amicus* brief, the United States explained that "the Corps will 'offset' additional basin inflow from the Flint River by storing more water on the Chattahoochee River" during drought operations or low-flow periods. U.S. Post-Trial Br. 12, 17-18. According to the United States, any increased flows generated on the Flint River during these times "would generally result in a net increase in storage upstream"—not increased flows into Florida. *Id.* at 13. All the while, the Corps would "maintain[] flow into Florida of roughly 5,000 cfs." *Id.* The United States made clear that increases in Flint River flows during dry months by as much as 2,000 cfs—a number far exceeding Georgia's maximum monthly water use in the ACF Basin—would not meaningfully increase flows into Florida. *Id.* at 17. As a result, during drought operations, "Apalachicola River flows would be very similar with or without a

consumption cap until enough water is stored to return the system to normal operations." *Id.* at 17-18. This "refilling" process, and thus drought operations, can last for months. *See* Bedient Direct ¶¶ 26, 29 (during the extreme drought of 2012-13, drought operations lasted 10 months).

Even if a consumption cap would meaningfully increase state-line flows during drought (which it would not), Florida's experts could not identify any material benefit such increases would have on the ecological injuries Florida alleges. For example, Florida's salinity expert found that, even if all of the water saved by a consumption cap somehow made its way to Florida, that additional water would have decreased salinity in Apalachicola Bay by less than 1 part per thousand in 2012—a *de minimis* amount that would have produced no ecological benefit. Greenblatt Direct at Att. 1 (Dkt. #572); Tr. 1775:7-1776:15, 1778:20-1779:1 (Greenblatt). Another of Florida's experts found that significant cuts in Georgia's water use would produce at most a 1.2% "maximum difference in the population" of oysters at the major oyster bars. Tr. 4409:24-4411:2 (Lipcius); Tr. 1724:24-1725:14 (White). Florida presented no evidence showing how such a minor change could result in meaningful ecological benefits.

2. The Special Master's Report

Although Florida claims throughout its brief that the Special Master made "findings" with respect to other issues—such as Florida's injury and the nature of Georgia's upstream water use—the Special Master in fact limited his Report to a "single, discrete issue." Report 30. Even "assuming" Florida could prove the

other elements necessary to obtain an equitable apportionment, the Special Master found that Florida "has not proven that its injury can be remedied" without a decree binding the Corps because the "evidence does not provide sufficient certainty that an effective remedy is available without the presence of the Corps as a party." *Id.* at 31.

The Special Master divided his analysis between (1) low-flow and drought periods; and (2) normal and wet periods. First, with respect to low-flow and drought periods, the Special Master found that "Florida has not proven by clear and convincing evidence that any additional streamflow in the Flint River or in the Chattahoochee River would be released from Woodruff Dam into the Apalachicola River at a time that would provide a material benefit to Florida." *Id.* at 47. This was due to "the Corps' operations of federal reservoirs," which "render[ed] any potential benefit to Florida from increased streamflow in the Flint River uncertain and speculative." *Id.* at 47-48. The Special Master found that "ensuring relief for Florida during these [dry periods] would require modification of the rules governing the Corps' reservoir operations and, hence, active participation by the Corps in this proceeding." *Id.* at 61-62.

Second, with respect to normal and wet periods, the Special Master found a complete failure of proof on Florida's part: "Florida presented no evidence assessing the impact of a consumption cap on shortening the Corps' drought operations or on increased pass-through flows during non-drought conditions." *Id.* at 65. And "[e]ven if there were

evidence of harm from other than low-flow conditions, Florida did not provide substantial evidence of the benefits (if any) from increased overall flows." *Id.* "Florida's lack of proof, combined with the credible testimony offered by Georgia," led the Special Master "to conclude that Florida has not carried its burden to show that it can obtain meaningful redress without a decree that binds the Corps." *Id.* at 68-69.

The Special Master reserved ruling on any issue other than effective redress. He stated that, if Florida had not failed to meet its burden of proof on that issue, "[m]uch more could be said and would need to be said" about "the harm suffered by Florida," "Georgia's consumptive water use," "causation," and "other issues." *Id.* at 31, 34.

SUMMARY OF THE ARGUMENT

The Special Master correctly recommended that the Court deny Florida's request for an equitable apportionment. Florida failed to prove, by clear and convincing evidence (or any other plausible standard), that the relief requested would effectively redress its alleged injuries. To the contrary, the evidence showed that, because of the Corps' extensive regulation of the waters in the ACF Basin, any potential benefits to Florida from a consumption cap on Georgia would be either speculative or nonexistent. The Court should accept the recommendation of the Special Master.

I. The Special Master applied the correct legal standard in finding that Florida failed to prove its case. He asked whether Florida's requested relief (a consumption cap on Georgia) would effectively

redress Florida's alleged injuries without the Corps as a party. That inquiry is a necessary part of the equitable balancing analysis: without proving that its proposed relief would redress its alleged injury, Florida cannot establish (as it must) that "the benefits of the diversion substantially outweigh the harm that might result." *Colorado I*, 459 U.S. at 187.

Florida's contrary argument rests on a distortion of the Special Master's Report. The Special Master did not require Florida to prove to "a certainty" that a decree would "fully redress" its alleged injury. Exceptions 25. Rather, relying on this Court's equitable apportionment precedents, he asked only whether Florida had presented "clear and convincing evidence" that its requested relief would be "effective" or "meaningful" in redressing its alleged injuries. Report 3, 30-31, 69. Florida's brief presents a crude caricature of the Special Master's decision: far from demanding *certainty*, the Special Master dismissed Florida's claims because the putative benefits were entirely *speculative* in the absence of the Corps participating as a party. And far from being "unprecedented," Exceptions 25, the clear-and-convincing-evidence standard is legally and logically the correct evidentiary standard for evaluating whether a state has established its entitlement to an equitable apportionment.

II. Florida failed to prove that a consumption cap would redress its alleged injuries. The United States made clear in its post-trial brief that because of the Corps' reservoir operations in the Basin, "Apalachicola River flows would be very similar with or without a consumption cap" during times of

drought or low flows—the only period for which Florida claims to have suffered injury. U.S. Post-Trial Br. 17-18. The United States' assessment was "supported by the evidence presented at trial," including uncontested government flow data and analysis done by both Georgia's *and* Florida's experts. Report 48. That evidence showed that, during drought conditions, the Corps offsets increased inflow from the Flint River by decreasing reservoir releases on the Chattahoochee River—resulting in no meaningful increase in flows into Florida. The Special Master specifically credited Georgia's experts and evidence on this point, while specifically discrediting the novel hydrologic "model" Florida crafted for purposes of this litigation.

Florida's attempts to relitigate the evidence presented at a five-week trial are without merit. The Special Master correctly rejected Florida's speculation that the Corps *might* voluntarily exercise its "discretion" to pass to Florida water generated by a consumption cap during periods of drought or low flows. Exceptions 40. The United States itself refuted Florida's position when it declared that, if a consumption cap were ordered by this Court, it would still keep Apalachicola River flows at roughly 5,000 cfs during times of drought. Moreover, the Corps does not have unfettered "discretion" over flows: to the contrary, it must make its water-management decisions within the context of a multitude of federal statutory purposes. Florida cannot overcome those realities by quoting a single sentence in the Corps' Record of Decision, particularly when the Corps was careful to explain in that document that it is not a party to this case, that

it operations are not at issue, and that it would do no more than "review" and "consider" any ruling. *Record of Decision* at 18.

Nor can Florida now shift tactics and try to argue that, even if Apalachicola flows would not materially increase during drought, the Court should nonetheless order relief because a consumption cap would improve conditions during non-drought periods or on the margins of drought operations by reducing the "frequency, duration, and severity of drought operations." Exceptions 46. The Special Master correctly found that Florida "presented no evidence [at trial] assessing the impact of a consumption cap on shortening the Corps' drought operations or on increased pass-through flows during non-drought conditions." Report 65. Indeed, to the extent the record contains any evidence at all regarding the effect of increased flows on shortening drought operations, "that evidence was presented by Georgia and tends to show an absence of any significant benefit to Florida." *Id.*

Despite Florida's pleas for this Court to ignore the operations of the Corps altogether, *see* Exceptions 37-40, the Special Master correctly recognized that those operations are not only relevant but dispositive. This Court has long accounted for the impact of "natural and man-made obstacles" in evaluating whether relief would be effective. *Idaho I*, 444 U.S. at 392. That is especially true where, as here, the "obstacle" in question involves the independent decisions of a third party.

III. Principles of equity fully support the Special Master's recommendation. There is no basis for a

court of equity to award relief that has not been proven to redress an alleged injury. There would be nothing equitable about disrupting the agricultural economy of Georgia, or the water-supply resources of millions of Georgia citizens, on the off-chance that it might (or might not) result in some marginal benefit to Florida. To invoke this Court's extraordinary equitable power, a state must show—at the very least—that the relief requested is highly likely to redress its alleged injury. Because Florida failed to make that showing here, equity does not entitle it to relief.

ARGUMENT

The decisive issue in this case is Florida's assertion that it can obtain effective relief against Georgia alone, despite the dominant role played by the Corps in the "highly regulated" ACF Basin. GX-544 at 2. Florida strategically narrowed its requested relief to a consumption cap on Georgia, betting its case on the proposition that it could prove that a cap alone would afford adequate relief without any change to Corps operations. After 18 months of discovery and a five-week trial, however, Florida failed to meet its burden of proof. Instead, the evidence showed that obtaining a meaningful increase in state-line flows during times of drought could not be achieved solely by reducing Georgia's consumption, but instead would require significant changes to the Corps' water control plans. The United States, participating as *amicus curiae*, agreed. Because the Court lacks power in this case to compel the Corps to change its operations, the Special Master correctly recommended that Florida's request for an equitable apportionment be denied.

I. The Special Master Applied The Correct Legal Standard In Finding That Florida Failed To Prove Its Case

The Special Master applied the correct legal standard in recommending that this Court deny relief. He correctly required Florida to prove, by clear and convincing evidence, that its requested relief would effectively redress its alleged injuries. Florida attacks that legal standard on two grounds, neither of which has merit. *First*, Florida accuses the Special Master of requiring it to prove that relief was "guaranteed" to "fully redress" Florida's injury. Exceptions 25, 29. Any fair reading of his Report makes clear, however, that the Special Master applied no such standard and instead required Florida to prove only that its requested relief was highly likely to yield "meaningful" or "material" benefits. Report 47, 69, 70. *Second*, Florida argues that it should not have been held to the clear-and-convincing-evidence standard. But that standard is well-established in this Court's equitable apportionment jurisprudence, and it plainly applies when evaluating the effectiveness of Florida's proposed relief.

A. The Special Master Correctly Required Florida To Prove Effective Redress

In recommending that the Court deny Florida relief, the Special Master correctly required Florida to prove that its requested relief would effectively redress its alleged injuries. Florida invoked this Court's jurisdiction to compel Georgia, a coequal sovereign, to substantially reduce its water use in the ACF Basin—a request that would negatively

affect millions of people and impose substantial economic harm. This Court fashioned the "federal common law" doctrine of "[e]quitable apportionment" to govern such disputes. *Colorado I*, 459 U.S. at 183. Before the Court will exercise its "extraordinary power" to order an equitable apportionment however, a complaining state must make a number of showings. *Washington*, 297 U.S. at 522. Among other things, a state seeking to alter the status quo through a new diversion of water must prove that the "benefits" of its proposed diversion will "substantially outweigh the harm that might result" to a sister state. *Colorado I*, 459 U.S. at 187.[6]

Weighing the costs and benefits of the requested relief necessarily requires asking whether such relief will effectively redress the alleged injuries. By definition, a state that cannot make such a redressability showing cannot prove that the "benefits" of a proposed apportionment "substantially outweigh the harm" to the other state. *Colorado I*, 459 U.S. at 187; *see also Idaho I*, 444 U.S. at 392; *Washington*, 297 U.S. at 522-23. Because there is no such thing as an equitable apportionment action "to vindicate a barren right," *Washington*, 297 U.S. at 523, this Court will not award equitable relief where a proposed remedy will not provide effective redress.

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[6] A complaining state must also prove (1) that it is suffering "real and substantial injury or damage," *Idaho ex rel. Evans v. Oregon*, 462 U.S. 1017, 1027 (1983) (*Idaho II*); (2) that its injury is caused by a sister state's water use, *Pennsylvania v. New Jersey*, 426 U.S. 660, 663 (1976) (*per curiam*); and (3) that the sister state's water uses are inequitable, *Washington*, 297 U.S. at 523-24.

Prior cases recognize that an equitable apportionment will not be granted where the plaintiff state has failed to prove that its requested relief will effectively redress its alleged injuries. In *Washington v. Oregon*, for example, Washington sought increased flow from the Walla Walla River by asking the Court to curb Oregon irrigators' use of dams to divert water for agricultural use. *See* 297 U.S. at 518-21. But Washington's request ran into a fundamental problem: the water released by removing the dams "would not reach" Washington because the water "would be quickly absorbed and lost in the deep gravel beneath the channel." *Id.* at 523. Because Washington had not proven that removing the dams would provide any "compensating benefit"—let alone one that would outweigh "the long established use in Oregon"—the Court denied relief. *Id.*

Idaho ex rel. Evans v. Oregon, articulated the same principle. Idaho sought an equitable apportionment of anadromous fish that migrated through the Columbia and Snake River System. *See* 444 U.S. at 381-82. The Court held early in the case that the United States was not an indispensable party because Idaho could conceivably obtain a greater share of fish without adjusting the government's operation of dams along the river system. *See id.* at 388-89. The Court could, in theory, "set aside a portion" of the fish harvested by Washington and Oregon, "taking into account the estimable mortality rate at each dam," and potentially increase the total fish migrating back to Idaho. *Id.* at 389. But the Court warned that Idaho's "narrow complaint [was] a two-edged sword."

Id. at 392. If Idaho could not prove that restricting upstream fishing would have an "*appreciable* effect upon the number of [fish] ... arriving in Idaho"—because, for example, "natural and man-made obstacles" like the government's operation of the dams "prevent any additional fish ... from reaching Idaho in numbers justifying" the requested restrictions—Idaho's claim would fail. *Id.* (emphasis added).[7]

By its own admission, Florida placed itself "in the exact same position" as Idaho in *Idaho I*. 6/2/15 Hr'g Tr. 27:2-3. Although the Corps controls flows into the Apalachicola River, Florida sought increased flows by requesting only that the Court reduce Georgia's consumption of water and not impose any obligations on the Corps itself. Like Idaho, Florida's tactic allowed it to "sidestep[]" dismissal at the outset for failure to join the United States, but required Florida to "shoulder the burden" of proving that a consumption cap would actually result in an increase in water flow "in numbers justifying" the requested restrictions. *Idaho I*, 444 U.S. at 392. As counsel for Florida told the Special Master early in this case: "ultimately, if you conclude after a trial that caps on consumption will not redress Florida's

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[7] Idaho was able to establish the existence of a "workable decree" that did not involve the United States and that would ensure a meaningful number of fish made it to Idaho, although Idaho's case ultimately failed because it did not prove injury or inequitable use. *Idaho II*, 462 U.S. at 1026. Florida, in contrast, failed to prove that the Court could fashion effective relief in the absence of the Corps as a party.

harm, then Florida will not have proved its case." 6/2/15 Hr'g Tr. 29:21-30:3.

Applying *Washington* and *Idaho I*'s requirement that "the injury must be redressable by the Court," Report 24, the Special Master correctly examined whether "a consumption cap—the proposed remedy in this case—[would] provide equitable redress for Florida's injury," *id.* at 27. The Special Master found that "Florida has not proven that its injury can be remedied" without "a decree binding the Corps" because the "evidence does not provide sufficient certainty that an effective remedy is available without the presence of the Corps as a party." Report 30-31. In particular, Florida failed to prove "that any additional streamflow in the Flint River or in the Chattahoochee River would be released from Woodruff Dam into the Apalachicola River at a time that would provide a material benefit to Florida (*i.e.*, during dry periods)." *Id.* at 47; *see also id.* at 68-69 ("Florida's lack of proof, combined with the credible testimony offered by Georgia, leads me to conclude that Florida has not carried its burden to show that it can obtain meaningful redress without a decree that binds the Corps.").

In attacking the Special Master's analysis, Florida repeatedly relies on this Court's statement in *Idaho II* that "[u]ncertainties about the future ... do not provide a basis for declining to fashion a decree." 462 U.S. at 1026; *see* Exceptions 2, 25-26, 30, 34. But that case hardly stands for the proposition that a plaintiff state can obtain an equitable apportionment without proving that the relief sought would redress its alleged injury. *Idaho II* simply acknowledged that equitable apportionments must rely on

"reasonable predictions of future conditions." 462 U.S. at 1026. Such predictions, however, must still be proven by *actual evidence* showing that such future conditions are in fact likely to occur. This Court will not order equitable relief where the benefits are "uncertain," *Washington*, 297 U.S. at 529, or "speculative and remote," *Colorado I*, 459 U.S. at 187. Florida's case failed becaused it did not prove that the Corps was likely to pass through additional water at the times necessary to redress Florida's alleged injury—not because the Special Master failed to make "reasonable predictions of future conditions." Exceptions 30.

Nor did the Special Master require Florida "to show to a *certainty* that a decree in its favor would *fully* redress its injury." *Id.* at 25 (emphases added). Both elements of that assertion are wrong. Taking the second element first, nowhere in his Report did the Special Master purport to require Florida to prove that its alleged injury would be "fully" remediated. Applying the case law discussed above, the Special Master merely asked whether Florida had proven that its requested relief would be "effective," Report 30-31, 35, 46-48, "meaningful," *id.* at 69, or "material," *id.* at 47, 70. Florida failed to make that showing. Indeed, far from proving effective relief, the evidence showed that a consumption cap would *not* result in meaningful benefits to Florida because Corps operations would prevent any material increases in Apalachicola River flows during dry periods.

The Special Master also did not require Florida to prove effective relief to an absolute "certainty." Rather, the Special Master applied a "clear and

convincing evidence" standard, which required Florida to prove "that the truth of its factual contentions [was] *'highly probable.'*" Report 28 (emphasis added) (quoting *Colorado v. New Mexico*, 467 U.S. 310, 316 (1984) (*Colorado II*)). While that is justifiably a demanding standard, it falls short of requiring total certainty of proof. And, as explained further below, the clear-and-convincing-evidence standard was the legally appropriate standard to apply under this Court's decisions in *Colorado I* and *Colorado II*.

Florida makes much of the Special Master's single use of the word "guarantee" on the penultimate page of his Report. *See* Report 69 ("There is no guarantee that the Corps will exercise its discretion to release or hold back water at any particular time."). Seizing on that single word, Florida claims—no fewer than 17 times—that the Special Master required Florida to prove that the Corps was "guaranteed" to pass any conserved water through to the Apalachicola River. *See, e.g.*, Exceptions 1, 19, 24. In context, however, the Special Master used the word "guarantee" not to describe the evidentiary standard he was applying, but instead to emphasize how the Corps' control over water flows in the ACF Basin rendered any benefits to Florida from a consumption cap highly speculative and uncertain. *See* Report 69. Moreover, reviewing the Special Master's full Report makes clear that he did not require Florida to prove that relief was "guaranteed." Instead, he consistently required Florida to prove only that the evidence of increased state-line flows resulting from a consumption on Georgia was "clear and convincing." *Id.* at 3, 29, 47,

51, 61. Not only did Florida fail to make that showing, but the evidence at trial "tend[ed] to show" the opposite—namely, that any benefit to Florida was unlikely because the Corps' operations would "offset any increased flows" resulting from Florida's proposed cap. *Id.* at 47, 48.

In the end, the Special Master denied relief not because Florida failed to prove its case to a "certainty," Exceptions 25, but because the evidence showed that the potential benefit to Florida of a consumption cap was "uncertain and speculative" in light of the Corps' operations in the ACF Basin. Report 48; *id.* at 56 n.38 (finding that "any release in excess of the mandatory minimum" by the Corps during a drought "is inherently discretionary and therefore uncertain"); *id.* at 63 (finding "the efficacy of any relief speculative"); *id.* at 68 ("[T]he benefits to Florida [of a cap] are likely rare and unpredicable."). In doing so, the Special Master correctly applied this Court's precedents. *See Washington*, 297 U.S. at 522-23; *Idaho I*, 444 U.S. at 392.

B. Florida's Burden Was One Of Clear And Convincing Evidence

Florida asserts that the Special Master erred by applying the clear-and-convincing standard to the effective redress inquiry. *See* Exceptions 34-36. Florida claims that once it has proven "by clear and convincing evidence an injury," the case shifts into equitable balancing and "on *that* question, there is no reason to tilt the scale in favor of Georgia." *Id.* at 35. That argument has no basis in law or logic.

This Court has made clear that because of the interests at stake, the clear-and-convincing standard

applies broadly in equitable apportionment cases and is not limited to proof of injury. In particular, the Court has held that, in "weigh[ing] the harms and benefits to competing states," the state seeking to disrupt the status quo must "demonstrate[] by clear and convincing evidence that the benefits of the diversion substantially outweigh the harm that might result." *Colorado I*, 459 U.S. at 186; *see also Colorado II*, 467 U.S. at 313. If a state seeking a diversion of water like Florida does here must prove by clear and convincing evidence that the benefits of a remedy substantially outweigh the harm, it necessarily follows that such a state must also prove effective redress by that standard. Proving effective redress is, after all, a necessary part of establishing the "benefits" side of the balancing inquiry. *See supra* Part I.A.

The rationales this Court gave for adopting the clear-and-convincing standard also apply as much to the effective redress prong of the equitable apportionment analysis as they do to other elements. *See Colorado I*, 459 U.S. at 187-88. Requiring a plaintiff state to prove that its requested relief is "highly probable" to redress its alleged injuries appropriately accounts for "the unique interests involved in water rights disputes between sovereigns." *Colorado II*, 467 U.S. at 316. The Court has long been "conscious of the great and serious caution with which it is necessary to approach the inquiry whether a case is proved." *Colorado v. Kansas*, 320 U.S. 383, 393 (1943). Before this Court will award any relief in a dispute between states, "the case must be of serious magnitude and fully and clearly proved." *Id.*

That is all the more true in a case such as this, where Florida seeks to upset substantial and longstanding economies in Georgia. The Court has recognized that "the equities supporting the protection of existing economies will usually be compelling." *Colorado I*, 459 U.S. at 187; *see also Colorado II*, 467 U.S. at 316-17. That is so because "[t]he harm that may result from disrupting established uses is typically certain and immediate, whereas the potential benefits from a proposed diversion may be speculative and remote." *Colorado I*, 459 U.S. at 187. Allowing an equitable apportionment only when a state seeking a diversion has proven the existence of effective relief by clear and convincing evidence avoids disrupting such established uses for futile or speculative purposes.

Nor can Florida lighten its burden of proof on redressability in this context by analogy to Article III standing. *See* Exceptions 31-32. Such standing is necessary, but not sufficient, to pursue an original action. *See, e.g., Wyoming v. Oklahoma*, 502 U.S. 437, 447 (1992). On the merits, a state—like Florida—that brings an equitable apportionment action to alter the status quo must prove its case by "clear and convincing evidence." *Colorado II*, 467 U.S. at 316; *see also Maryland v. Louisiana*, 451 U.S. 725, 736 n.11 (1981). It follows that Florida must establish by clear and convincing evidence that the relief it seeks here would effectively redress the injuries alleged. That burden of proof is, of course, far more demanding than the burden applicable to assessing Article III standing in "the ordinary civil case." *Colorado II*, 467 U.S. at 316. Thus, the Article III standing cases cited by Florida—none of

which involve redressability as a merits issue that must be proven by clear and convincing evidence—miss the point.

II. Florida Failed To Prove That A Consumption Cap Would Provide Effective Relief

Applying the clear-and-convincing standard, the Special Master found that "Florida has failed to show that a consumption cap will afford adequate relief." Report 69. That conclusion is amply supported by the record. The United States confirmed in its post-trial brief that, during drought conditions, "Apalachicola River flows would be very similar with or without a consumption cap." U.S. Post-Trial Br. 17-18. And the Special Master found that the United States' position was independently corroborated and "supported by the evidence presented at trial," including uncontested government flow data, modeling and analysis by Georgia's experts, and even modeling and analysis from Florida's own experts. Report 48. Although the "ultimate responsibility for deciding what are correct findings of fact remains with" this Court, "the [Special] Master's findings ... deserve respect and a tacit presumption of correctness." *Colorado II*, 467 U.S. at 317. Florida has provided no basis for second-guessing those conclusions here.

A. Florida's Claims Cannot Be Squared With The United States' Description Of Its Own Reservoir Operations

The United States has confirmed that imposing a consumption cap on Georgia would not have a material impact on flows into Florida during drought

periods. At the Special Master's request, the United States "describe[d] the Corps' current operating procedures" and explained "how the Corps would operate" its reservoirs in response to a hypothetical consumption cap. U.S. Post-Trial Br. 1, 17. Specifically, the United States evaluated an increase in basin inflow of 2,000 cfs—a hypothetical scenario in which the Corps assumed that a cap could generate the maximum flow Florida requested—and explained how its reservoir operating rules would dictate storage and releases of that excess water under various hydrologic conditions.

In responding to the Special Master's request, the United States unequivocally stated: "The Corps expects in an extreme low flow scenario that Apalachicola River flows would be very similar with or without a consumption cap until enough water is stored to return the system to normal operations."[8] *Id.* at 17-18. The United States explained that "if drought operations have begun," even a substantial increase in basin inflow of 2,000 cfs above Woodruff Dam "would generally result in a net increase in storage upstream until drought operations ceased," while the Corps "maintain[ed] flow into Florida of roughly 5,000 cfs." *Id.* at 13; *see also id.* at 2 (confirming that, during drought, "an increase in basin inflow above Jim Woodruff Dam" would result in "no immediate increase of flow into the

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[8] The term "extreme low flow scenario" refers to the Corps' "drought operations." *See id.* at 17 (describing an "Extreme Low Flow" scenario as one where "drought operations have already been triggered").

Apalachicola but additional storage of water in the federal projects"). Thus, even assuming it were feasible for a consumption cap to generate the increased flows Florida seeks—and it is not—the Corps confirmed that such caps would yield no material increase in state-line flows at the times Florida has alleged injury.

The United States further confirmed that it would make no difference whether this additional basin inflow entered the system from the Flint River or the Chattahoochee River. Should an increase in basin inflow of 2,000 cfs come from the Flint River, the United States explained, "the Corps will 'offset' additional basin inflow from the Flint River by storing more water on the Chattahoochee River." *Id.* at 12. The reason the Corps would "offset" an increase in Flint River flows is because "[i]f a consumption cap produced 2,000 cfs of additional flow on the Flint River, ... then the Corps would not need to release [as much] water from storage to meet the minimum flow requirement [at the state line] and would not do so as a matter of course." *Id.* at 17.

Florida maintains that the Court should ignore these statements from the United States' brief, arguing that the brief is not "evidence" and that the Special Master's reliance on it is "misplaced." Exceptions 44. Florida never objected below, however, to the United States filing such a brief or to the Special Master considering it. Indeed, Florida *itself* repeatedly relied on the United States' *amicus* briefs throughout this case, *see, e.g.*, Florida Post-Trial Response Br. 2, 5-7, 9, 11-14, 18, 66 (Dkt. #633), and continues to rely on those briefs in its Exceptions filed before this Court, *see* Exceptions 43,

48. In any event, the United States' interpretation of its reservoir operating rules, like an agency's interpretation of its regulations, is entitled to deference under this Court's precedents—including where, as here, it is advanced in an *amicus* brief. *See Chase Bank USA N.A. v. McCoy*, 562 U.S. 195, 208-211 (2011); *Auer v. Robbins*, 519 U.S. 452, 461-463 (1997).

Florida also selectively quotes from the Corps' recent Record of Decision adopting the new Master Water Control Manual, arguing that a single sentence from that document overrides the Corps' statements in its *amicus* brief and "eliminates any doubt" that the Corps will pass to Florida additional water generated by a consumption cap. Exceptions 2 (citing *Record of Decision* at 18). But the Record of Decision says no such thing, and Florida's selective quotation is misleading at best. The very first sentence of the paragraph Florida quotes states: "With respect to the *Florida v. Georgia* case, [the Corps] will *review* any final decision from the U.S. Supreme Court and *consider* any operational adjustments that are appropriate in light of that decision, including modifications to the then-existing [Manual], *if applicable*." *Record of Decision* at 18 (emphases added). The Corps then goes on to emphasize that: "*However*, [the Corps] is not a party to the case, and [Corps] operations are not at issue in the litigation." *Id.* (emphasis added).

The Record of Decision thus does nothing more than acknowledge the uncontroversial point that, although the Corps is not bound by any decision in this case, it nonetheless will "review" any ruling and "consider" changes to its operations. It cannot be

inferred from that truism that the Corps has somehow committed itself to upending its newly adopted Water Control Manual—the result of nearly ten years of review and revision by the Corps and other federal agencies—in response to a hypothetical judicial order in a case to which it is not a party. Florida certainly produced no evidence, much less clear and convincing evidence, that the Corps would in fact do so. To the contrary, federal legislation would be needed to require the Corps to adjust its operations to comply with an order in this case—a concept that is not novel to Florida, which has acknowledged that an act of Congress was required to compel the Corps to comply with the ACF Compact 20 years ago. Exceptions 42. Absent a similar statutory command, nothing would require the Corps to adjust its operations to comply with an order here.

What is more, the Corps made clear in the Record of Decision that the Water Control Manual *already reflects* its considered judgment of how to "best balance[] the authorized project purposes," JX-124 at ES-16, and "best serve[] the overall public interest" in operating federal reservoirs, *Record of Decision* at 1. The operations detailed in the Manual take into account many of the concerns raised by Florida in this litigation and in prior litigation involving the Corps. JX-124 at 1-15 to 1-17 (noting that Florida's comments on the draft Environmental Impact Statement ("EIS") were "consistent with [Florida's] positions over the litigation history"); *id.* at ES-8 ("The final EIS addresses all comments received during the draft EIS public review period."). Those same operations have also been continually blessed

by the U.S. Fish and Wildlife Service as sufficiently protective of endangered species in Florida. *See* JX-168 at 3. In light of that administrative history, there is no sound basis for speculating (as Florida does) that the Corps would voluntarily choose to alter its operations in response to an order to which it is not legally bound.

In short, Florida's cherry-picked statement from the Record of Decision does not carry the weight that Florida would have it bear. Far more relevant and probative on this point is the United States' post-trial brief, which expressly addresses how the Corps would operate its reservoirs in response to a consumption cap. There, in direct response to a request from the Special Master, the United States confirmed that a cap would not materially change state-line flows during drought. U.S. Post-Trial Br. 17-18.

B. Any Benefit To Florida From A Consumption Cap Would Be "Uncertain And Speculative"

Although the Corps' interpretation of its own Water Control Manual is entitled to deference under existing precedent, the Special Master did not take the United States' word for granted in concluding that a consumption cap would not provide effective relief. Rather, he independently examined the evidence put forth by both States and found that it supported the United States' and Georgia's position, concluding that the "evidence ... tends to show that the Corps' operation of federal reservoirs along the Chattahoochee River creates a highly regulated system over much of the basin, rendering any

potential benefit to Florida from increased streamflow in the Flint River uncertain and speculative." Report 47-48 (quotations and alterations omitted). The trial record strongly supports this finding.

1. The Corps' Practice Is To Offset Flint River Flows During Drought

Based on the evidence presented at trial, the Special Master concluded that the Corps' past practice during drought has been to offset increased flows from the Flint River with reduced reservoir releases from the Chattahoochee River—precisely as the United States describes in its brief. *See id.* Florida's claims to the contrary are unfounded.

The Corps' project data for its reservoirs (*e.g.*, daily recorded inflows and outflows) confirms that the Corps offsets flows during drought. The Special Master found that "historical inflow and outflow data suggests that, during drought operations, the Corps releases less water from ... all of the reservoirs on the Chattahoochee River ... when local inflow at Lake Seminole [from the Flint River] increases." *Id.* at 51 (citing Bedient Direct ¶¶ 149-50 (analysis of Corps project data)). In other words, during drought, an *increase* in flow into Lake Seminole from the Flint River corresponds with a *decrease* in flow into Lake Seminole from the Chattahoochee River. "This confirms that, at least to some degree, the Corps may offset increased inflow from the Flint River by decreasing releases from its reservoirs along the Chattahoochee River." *Id.*

This conclusion is supported by observed flow records maintained by the U.S. Geological Survey for

both the Flint and Apalachicola Rivers. That data shows that, during drought, Flint River flows can increase by thousands of cfs (due to local weather events and rainfall) while at the same time generating no discernible increase in flows into Florida. Bedient Direct ¶ 44. For example, in the extreme drought year of 2012, recorded flows into Woodruff Dam from the Flint River naturally fluctuated by as much as 2,000 cfs. *Id.* Yet the recorded flow in the Apalachicola River immediately downstream of Woodruff Dam did not materially change, instead hovering around 5,000 cfs, the prescribed minimum flow set by the Corps. *Id.*; Tr. 3342:7-3343:19 (Zeng). As the Special Master concluded, this data confirms "that increased streamflow in the Flint River will not necessarily translate into increased streamflow in Florida" during drought. Report 49.

In addition to this objective government data, the Special Master also relied on testimony from two Georgia witnesses: Dr. Philip Bedient, Georgia's hydrology and reservoir expert, and Dr. Wei Zeng, the State's chief hydrologist. Report, 50-51, 58-59. Drs. Bedient and Zeng both concluded that, based on their expertise and experience with Corps operations, the Corps offsets increases in basin inflow and maintains releases of roughly 5,000 cfs into Florida during drought. Bedient Direct ¶ 45 (explaining how "even if reductions in Georgia's water use occurred only on the Flint River during times of drought or low flows, the increase in inflow to Lake Seminole would not necessarily result in any increase in state-line flow into Florida" because any extra flows would be "offset by corresponding

reductions in releases from the reservoirs on the Chattahoochee River"); Tr. 3341:9-3342:6 (Zeng) (explaining that "[w]hen you do have more water coming in from the Flint side," the Corps will "reduce release[s] from the Chattahoochee side so that the combined water going into Jim Woodruff is just 5,000 cfs").[9]

2. The Special Master Found Georgia's Consumption Cap Modeling "Reliable" And Florida's To Suffer From "Critical Shortcomings"

The Special Master also found that reservoir modeling conducted by the parties confirmed his conclusion that a consumption cap would not have a material impact on state-line flows during drought.

To simulate the impact of a consumption cap, Dr. Bedient conducted reservoir modeling using the Corps' official "Reservoir Simulation" model for the ACF Basin ("ResSim"). ResSim is a model built by the Corps' Hydrologic Engineering Center and is used by the Corps to "simulate[] Basin-wide reservoir operations based on the Corps' operating rules and hydrologic conditions." Report 66. "ResSim is 'the

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[9] Although the Special Master cites both Drs. Bedient and Zeng approvingly on the key issues in this case, he noted in passing that Georgia's experts "erred" on a discrete issue: describing releases from Woodruff Dam as "targets," rather than "minimum[s]." Report 54. In fairness, the Corps itself has used both terms to describe the 5,000 cfs figure, *see, e.g.*, JX-124, vol. 2, at 7-6 (referring to "Minimum flow targets"). Ultimately, this semantic distinction is immaterial, since the United States has now confirmed that during drought, the Corps "maintain[s] flow into Florida of roughly 5,000 cfs." U.S. Post-Trial Br. 13.

standard for [Corps] reservoir operations modeling,' and is the 'tool most capable of faithfully representing' reservoir operations" in the ACF Basin. *Id.* at 68 (quoting JX-124 at 4-3, ES-14 n.2; Bedient Direct ¶¶ 65-66). The Corps relied "extensively" on ResSim to develop its Master Water Control Manual. JX-124 at 4-3, ES-14. Florida's own expert, James Barton, touted ResSim as the best available tool for evaluating the Corps' operations in the ACF Basin. Barton Dep. Tr. 130:8-15, 134:2-3. And the Special Master found that ResSim is an "accurate model," Report 68, and "a valid tool for evaluating the impact of increased streamflow from the imposition of a consumption cap as compared to a historical record," *id.* at 67.[10]

Dr. Bedient's ResSim modeling—which the Special Master found "reliable"—showed that even a massive 30% reduction in Georgia's total consumptive use "would lead to virtually no change in state-line flows" during drought. Report 66. "Dr. Bedient also found that an increase of streamflow in the Basin of 1,000 cfs, as Florida suggests is possible, would result in only minimal increases in state-line

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[10] Although the Special Master found that ResSim was "reliable" and "accurate" for assessing the impact of a consumption cap, he found that it is not useful for "predicting" whether the Corps may make "discretionary" releases over 5,000 cfs. Report 60, 68. Latching on to this statement, Florida argues that Dr. Bedient's analysis is "fundamentally flawed" because he used ResSim. Exceptions 50. But as the Special Master correctly found, "the shortcomings identified by Florida are not relevant when ResSim is used for comparative purposes (as Dr. Bedient used it) because any errors are canceled out." Report 67.

flows in critical summer months." *Id.* at 66-67. Florida's chief hydrology expert, Dr. George Hornberger, conducted his own modeling study using ResSim and found virtually the same thing as Dr. Bedient: even "a *fifty percent* reduction in Georgia's agricultural [water] use would not lead to any increased streamflow into Florida for many of the dry months during dry years such as those experienced in 2011 and 2012." *Id.* at 67 n.43 (emphasis added).

After Dr. Hornberger's ResSim analysis yielded results clearly favoring Georgia's position, Florida tasked Dr. Hornberger with creating an entirely new model—one never before used by the Corps or anyone else—to generate a different result. Tr. 1943:21-1944:14 (Hornberger). But Florida's new model was completely unreliable, as it was engineered exclusively to generate results that supported Florida's litigation position. *Id. at* 1949:10-1950:7 (acknowledging that Florida's new model made it "mathematically impossible" to generate a result contrary to Florida's litigation position). Instead of simulating all five reservoirs, like ResSim does, Florida's new model simulated only Lake Seminole, and could only produce a single result—it artificially forced *all* extra water to pass through to Florida. Report 57; Tr. 1945:2-8, 1947:3-21 (Hornberger) (admitting that the "Lake Seminole Model does not and cannot do any type of calculation involving the other four reservoirs in the ACF system"). As a result, the model "does not allow for the possibility that increase[d] flows from the Flint River will be offset by increases in storage on the Chattahoochee River." Report 57. For that reason

and others, the Special Master found that Florida's new model was altogether unreliable and beset by "critical shortcoming[s]" and "predictive anomalies." *Id.* at 56-58.

As the Special Master concluded: "Given the [ResSim] modeling results of Dr. Hornberger, as well as the results reached by Dr. Bedient when he modeled Florida's proposed increase in streamflow of 1,000 cfs," there is "no basis to conclude that a consumption cap will afford Florida effective relief." *Id.* at 67 n.43.

3. Florida Has Admitted That The Only Way To Materially Increase State-Line Flows During Drought Is By Involving The Corps

The Special Master's conclusion that a consumption cap would not generate a material increase in state-line flow during drought is also supported by testimony from Florida's own witnesses and experts.

At trial, Dr. Peter Shanahan, Florida's primary reservoir expert, admitted in response to a direct question from the Special Master that, during drought, the Corps effectively "move[s] water upstream" by offsetting flows on the Flint River with decreased releases from the reservoirs on the Chattahoochee River. Tr. 2552:24-2553:7. Dr. Shanahan also admitted that his own analysis showed no relationship between Flint River flows and Apalachicola River flows during drought, even when Flint River flows increased by as much as 2,000 cfs. Tr. 2512:13-16. In fact, after reviewing Dr. Shanahan's written testimony and observing his

cross examination in court, the Special Master concluded that "Dr. Shanahan's own analysis shows that Basin inflow and local inflow into Lake Seminole can vary by thousands of cfs without affecting observed flows in the Apalachicola River." Report 52.

Florida's hydrology expert, Dr. Hornberger, similarly admitted that a fluctuation of 2,000 cfs in Flint River flows generated "no corresponding increase in state line flows" in Florida. Tr. 1982:21-1985:10. Florida's chief hydrologic modeler for over 15 years also confirmed Georgia's position:

> Q. So under the current [Corps operating plan], even if Georgia decreases its consumptive uses of water, the benefit of increased flows will not reach the Apalachicola River without a change in the operations of the Army Corps of Engineers[?]
>
> A: Yes.

Leitman Dep. Tr. 207:21-208:2 (played at Tr. 4060:6-4065:8). Moreover, James Barton, a Florida reservoir expert who has 30 years of experience in Corps reservoir operations, candidly testified that "because the Corps operates the Woodruff Dam and that's what releases the water into Florida, there would probably need to be some involvement of the Corps" in order to increase flows into the Apalachicola River during drought. Barton Dep. Tr. 204:6-16. When asked whether the Corps would have to be involved to guarantee Florida a reliable or predictable flow above 5,000 cfs during drought, Mr. Barton put a fine point on his answer: "I don't see

how else you would do it." Barton Dep. Tr. 205:14-20.

4. Florida Failed To Prove That The Corps Would Exercise "Discretion" To Pass Along Additional Water From Georgia During Drought

Despite this evidence, Florida nonetheless argues that, if this Court were to order a consumption cap on Georgia, the Corps might voluntarily choose to exercise its "discretion" to pass any water saved to Florida. *See* Exceptions 40-46. That argument fails for a number of reasons.

For one thing, the United States' post-trial brief clearly states that the Corps *would not* release more than the 5,000 cfs minimum during times of drought if additional water were to enter its facilities, including from any consumption cap, but would instead store any excess water in upstream reservoirs. *See supra* Part II.A. That alone is enough to disprove Florida's speculation about how the Corps might exercise its discretion in response to an order in this case. In addition, Florida bears the burden of showing that it is "highly probable" that the Corps will *in fact* exercise its discretion to pass through more water. *Colorado II*, 467 U.S. at 316. It is not enough for Florida to speculate, as it does, that the Corps *might* chose to do so.

True, the Special Master did find that the Corps retains some degree of "discretion" in operating the reservoirs, including the ability to release in excess of 5,000 cfs at certain times. But any such discretionary releases are tightly constrained by the Corps' operating rules. As the United States

explained, the Corps will make discretionary releases only "*as necessary* to meet other project purposes, like hydropower generation and flood risk management." U.S. Post-Trial Br. 17 (emphasis added). The Corps thus exercises "discretion" to release more than 5,000 cfs under very specific circumstances, such as releases for dam safety as a result of flash rainfall events. *See, e.g.*, JX-124 at 2-80 (describing the use of discretion for "unplanned" and "emergency deviations," including for "dam safety issues," emergencies, and hydropower, but not for fish and wildlife); Tr. 3339:9-21 (Zeng) (explaining that flows above 5,000 cfs have occasionally occurred based on "local rainstorms that bring unexpected water").

These types of occasional discretionary releases are quantitatively and qualitatively different from the type of open-ended "discretion" Florida speculates the Corps might exercise in response to a decree from this Court—to release thousands of cfs at times when water is scarce and the rules call for conserving reservoir storage. Indeed, nowhere does the Corps claim that it makes "discretionary" releases during drought in order to pass extra water through to Florida. Quite the opposite: during drought, the Corps seeks to achieve a "*net increase in storage* upstream until drought operations cease[]" while keeping flows into Florida at "roughly 5,000 cfs." U.S. Post-Trial Br. 13 (emphasis added); JX-124 at 2-28, 2-33, 2-40 ("Under dry conditions ..., project operations are adjusted to conserve storage in [the reservoirs] while continuing to meet project purposes.").

More fundamentally, there are serious legal obstacles to the Corps exercising its discretion in the manner Florida suggests. The Corps is statutorily required to regulate lake levels and water flows in the Basin to serve a number of federal statutory purposes—only one of which is fish and wildlife conservation. JX-124 at 2-62. If the Corps were to deliberately draw down its reservoirs and release in excess of 5,000 cfs into the Apalachicola River during drought, that would be inconsistent with the Corps' statutory mandate because it would unreasonably favor a single project purpose (downstream fish and wildlife) over all other federal project purposes (such as water supply for over 5 million people). It would also make little practical sense. The Corps' express purpose in having drought operations in the first place is to "conserv[e] reservoir storage as drier conditions develop in the basin." Corps, *Final Environmental Impact Statement* at ES-39 (Dec. 2016) (*Final EIS*), http://tinyurl.com/ybjwga43. And the federal government has already determined that 5,000 cfs is sufficient to protect even the most endangered fish and wildlife in the Apalachicola River. JX-168 at 3.

C. Florida Failed To Prove Meaningful Benefits From Increased Overall Flows

Unable to show that Apalachicola River flows would increase during times of drought, Florida now shifts tactics and argues that a consumption cap would provide meaningful redress (i) *outside* of drought periods, including during normal and wet years and (ii) at the margins of drought operations by reducing the "frequency, duration, and severity of drought operations." Exceptions 46. Those claims

are remarkable because, as the Special Master found, Florida had a complete "lack of proof" on those issues at trial. Report 68-69.

To begin, Florida's witnesses "did not present any evidence that Florida has been harmed by Georgia's water use in 'wet' or 'average' years, much less that a consumption cap in those years would redress any harm to Florida." *Id.* at 63. The Special Master went on:

- "Florida in its trial presentation did not meaningfully advance any claim of harm from non-drought years." *Id.* at 64.
- "Even if there were evidence of harm from other than low-flow conditions, Florida did not provide substantial evidence of the benefits (if any) from increased overall flows." *Id.* at 65.
- "Florida has provided no evidence that a decree in this case could provide an effective remedy during normal (*i.e.*, non-drought) periods." *Id.* at 68.

Florida nowhere addresses these specific findings by the Special Master.

In addition, Florida did not prove the extent to which drought operations would be shortened as a result of the relief requested or the level of benefits such marginal increased flows would afford. As the Special Master found, "Florida did not quantify at trial the benefits from shortened drought operations or increased flows during non-drought operations." *Id.* at 65. Indeed, in the entire five-week trial, "Florida presented *no evidence* assessing the impact of a consumption cap on shortening the Corps'

drought operations or on increased pass-through flows during non-drought conditions." *Id.* (emphasis added); *id.* ("Florida did not provide substantial evidence of the benefits (if any) from increased overall flows."). Having failed to prove this theory at trial—despite having had *years* to compile evidence—Florida cannot advance it now as grounds for overruling the Special Master's findings.

Indeed, the Special Master found that Georgia was the only party to offer evidence on this point—and that evidence showed that it was far more likely that a consumption cap would do little to nothing to shorten drought operations, let alone have any meaningful ecological impact. *See id.* at 65. Dr. Bedient evaluated the extent to which a cap might shorten drought operations and found that, even with a substantial increase in basin inflow, "there would be only minimal increased flows into Florida as a result of pass-through operations or shortened drought operations." *Id.* at 66. The Special Master accepted and adopted Dr. Bedient's analysis, finding that "even to the extent that Florida may receive additional state-line flows as a result of increases in Basin inflow from a cap on Georgia's consumptive water use, the benefits to Florida are likely rare and unpredictable." *Id.* at 68.

D. The Special Master's Consideration Of The Role Of The Corps Was Proper

Finally, Florida argues that the Special Master legally erred by considering the role of the Corps *at all*, "because the possibility that a third party could take action to frustrate or impair a court-ordered remedy is not a basis to find lack of redressability

where, as here, the third party's action is not *required* to secure relief." Exceptions 39. That is wrong as a matter of law and fact.

As part of the equitable balancing process, the Court necessarily examines whether some obstacle might prevent requested relief from effectively redressing an alleged injury. That is the lesson of *Idaho I* and *Washington*. In *Idaho I*, the Court explicitly warned that if "a trial ... demonstrate[d] that natural and *man-made obstacles*"—*i.e.*, Army Corps dams and their operation—would prevent effective redress, then equitable relief may not be available. 444 U.S. at 392 (emphasis added). *Washington* likewise involved an obstacle (natural, in that case) that rendered ineffective Washington's proposal to curb Oregon farmers' use of water from the Walla Walla River. *See* 297 U.S. at 522-23.

It also makes good sense to consider such obstacles as part of the broader equitable balancing framework. When something—a third party's actions, the nature of a riverbed, or a manmade object—stands as an obstacle to the realization of the "benefits" that a plaintiff state claims, those benefits cannot be said to "substantially outweigh the harm" that the proposed restriction will cause. *Colorado I*, 459 U.S. at 187. Florida's argument for ignoring the actions of third parties is thus an especially poor fit in the equitable apportionment context. It also runs counter to other areas of the law that recognize that the independent decionmaking of a third party can pose redressabilitiy problems. *See Lujan v. Defs. of Wildlife*, 504 U.S. 555, 562 (1992) (acknowledging redressability problems can exist when relief "depends on the unfettered choices made by

independent actors not before the courts and whose exercise of broad and legitimate discretion the courts cannot presume either to control or to predict" (citations omitted)).

Florida's argument also fails on its own terms. The evidence at trial showed, and the Special Master found, that action by the Corps *is* "required to secure relief" for Florida. Exceptions 39. Under the Corps' current operations, a cap would not result in getting more water to Florida during drought or low-flow peirods. Instead, effective relief "would require modification of the rules governing the Corps' reservoir operations and, hence, active participation by the Corps in this proceeding." Report 61-62.

III. Principles Of Equity Support The Special Master's Recommendation

Florida closes its brief with an appeal to general principles of equity. *See* Exception 53. Yet those principles fully support the Special Master's recommendation here.

It is a time-honored principle of equity that a court will not award relief that has not been proven to effectively redress an asserted harm. "A court of equity is not called upon to do a vain thing." *Foster v. Mansfield*, 146 U.S. 88, 101-02 (1892); 30A C.J.S. *Equity* § 15 ("A court sitting in equity will not do a useless or vain thing, and will not require the doing of a vain or useless thing."); 27A Am. Jur. 2d *Equity* § 91 (similar). Indeed, the "axiom of equity that a court of equity will not do a useless thing," *N.Y. Times Co. v. United States*, 403 U.S. 713, 744 (1971) (Marshall, J., concurring), appears throughout this Court's equitable apportionment cases. In

Washington, for example, the Court refused to "bring distress and even ruin to a long-established settlement of tillers of the soil for no other or better purpose than to vindicate a barren right." 297 U.S. at 523. Far from being the "high equity that moves the conscience of the court in giving judgment between states," ordering ineffective relief would be "the summum jus of power." *Id.*

Moreover, Florida mischaracterizes the Special Master's Report when it argues that equity entitles it to relief because the Special Master purportedly "found" injury to Florida and inequitable conduct by Georgia. Exceptions 53. The Special Master expressly declined to reach any issue *other* than the "single, discrete issue" of whether a consumption cap would be effective without a decree binding the Corps. Report 30-31. The Special Master did not resolve any other issue, such as Florida's alleged injury, causation, or the equitable nature of Georgia's upstream water use. And although the Special Master offered some "brief" initial observations on some (but not all) of those matters, *Id.* at 31, he confirmed that "[m]uch more could be said *and would need to be said*" on those other issues if Florida had not failed to meet its burden of proof on effective redress. *Id.* at 34 (emphasis added).

Nor is this case Florida's "last remaining, legal remedy." Exceptions 1. Florida's inability to prove entitlement to relief from Georgia alone reflects the role of the Corps in determining the amount and timing of water that flows into Florida. Florida is not without recourse on that front. Florida participated in the administrative process leading to the Corps' new Master Water Control Manual, and it

is free to challenge the Corps' determinations in federal court. *See Final EIS* ES-7, 1-15, 1-16. Indeed, lawsuits are already underway challenging the Water Control Manual, including by two Florida-based environmental groups arguing that the Corps' operations in the ACF Basin cause ecological harm.

For whatever reason, Florida has chosen not to join the litigation over the new Water Control Manual. Instead, Florida is staking its claim on a "narrow complaint" in this forum that it knew from the beginning was a "two-edged sword," *Idaho I*, 444 U.S. at 392. As Florida acknowledged early in this case, "if you conclude after a trial that caps on consumption will not redress Florida's harm, then Florida will not have proved its case." 6/2/15 Hr'g Tr. 29:21-24. That is precisely what happened.

CONCLUSION

For the foregoing reasons, the Court should accept the recommendation of the Special Master and deny Florida's request for relief.

July 31, 2017

Respectfully submitted,

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RECORD
AND
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In The

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STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

OFFICE OF THE SPECIAL MASTER

REPORT OF THE SPECIAL MASTER
February 14, 2017

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I. INTRODUCTION

This original jurisdiction proceeding arises from a dispute between the States of Florida and Georgia regarding Georgia's use of water in the Apalachicola-Chattahoochee-Flint River Basin (the "Basin"), which encompasses parts of Georgia, Alabama, and Florida. In its Complaint, Florida alleges that it has suffered serious harm to its ecology and economy – particularly in Apalachicola Bay (the "Bay") – because of reduced flows in the Apalachicola River (the "River") resulting from Georgia's increasing consumption of water from the Basin. Florida therefore seeks an equitable apportionment of the waters of the Basin.

This action is the latest battle in a long-running war between the State of Florida and the State of Georgia over the use of the waters of the Basin. Florida has long maintained that it is entitled to streamflow in the River adequate to sustain the riverine and estuarine ecosystems in the River and the Bay (collectively, the "Apalachicola Region") as well as the livelihood of those, like the oystermen of the Bay, who make their living from these ecosystems. Georgia, for its part, has insisted that it be permitted to consume sufficient water from the Basin to meet the municipal and industrial water demands of the Atlanta metropolitan area as well as the agricultural irrigation demands of farmers in southeastern Georgia. Decades of on-again-off-again negotiations and litigation over the use of the waters of the Basin have, unfortunately, led to this original jurisdiction proceeding rather than to a

mutually-acceptable solution negotiated by the States on behalf of all of the affected stakeholders in the Basin – oystermen, farmers, and businesses alike.

In this proceeding, Florida seeks a remedy for what it asserts is Georgia's excessive consumptive use of water[1] from the Basin. According to Florida, Georgia's consumption of water has reduced the flows in the River to an extent that is destroying the ecology of both the River and the Bay, as well as the economy of the Apalachicola Region. Georgia, in turn, argues that Florida's asserted harms are imaginary, self-inflicted, or inflicted by the operations of the United States Army Corps of Engineers (the "Corps") or changes in precipitation patterns (or some combination thereof) but in any event cannot be traced to Georgia's water use. Georgia also maintains that, without an order binding the Corps, Florida will not be assured any relief – assuming it has suffered any injury at all – by a decree entered in this proceeding because the Corps has the ability to impound water in various reservoirs that it maintains in the Basin. Both States warn of dire consequences if the Court does not resolve this

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[1] Throughout this Report, I employ the term "consumptive use" to refer to water withdrawn from surface water or underground aquifers that is evaporated, transpired, incorporated into products or crops, consumed by humans or livestock, or otherwise removed from the environment. Not all water withdrawals count as "consumptive use," given that some water withdrawn for use will return to streamflow or aquifers.

proceeding in their favor – Florida of an ecological and economic disaster in the Apalachicola Region; Georgia of a crippled city and arid farmland in Georgia.

The Court appointed me Special Master with direction to, among other things, direct the course of proceedings and submit reports as appropriate to resolve the dispute between the two States. After overseeing motions practice and discovery, holding a lengthy evidentiary hearing, and receiving detailed pre- and post-trial briefing, I hereby submit this Report to the Court. The Report identifies the issues before the Court, discusses the States' contentions, describes the evidence and law pertinent to the resolution of those issues, and sets forth a recommendation.

In sum, the Report recommends that the Court deny Florida's request for relief because the Corps is not a party to this original jurisdiction proceeding. Because the Corps is not a party, no decree entered by this Court can mandate any change in the Corps' operations in the Basin. Without the ability to bind the Corps, I am not persuaded that the Court can assure Florida the relief it seeks. I conclude that Florida has not proven by clear and convincing evidence that its injury can be redressed by an order equitably apportioning the waters of the Basin.

II. BACKGROUND[2]

A. The Basin and Bay

Three rivers comprise the Basin.[3] The Chattahoochee River arises in northeastern Georgia and flows over 430 miles south, forming part of the border between Georgia and Alabama, to its confluence with the Flint River at Lake Seminole and the Georgia-Florida state line. (JX124, at 2-15; Hornberger Direct,[4] at ¶ 30).

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[2] Citations to "JX__," "FX__," and "GX__" throughout this Report are, respectively, citations to exhibits admitted into evidence upon proffer by Florida and Georgia jointly, Florida, or Georgia. Page references in exhibit citations refer to the internal pagination of the cited documents, except when it is more helpful to use the Bates numbers assigned by the parties. (In such cases, I exclude the series of zeroes at the beginning of most page numbers to preserve space.) The exhibits themselves are maintained in the Special Master's file. Citations to "[Witness] Direct, at __" are citations to direct testimony submitted in writing. The written direct testimony is included on the Special Master's docket at entries 533-74. Citations to "Tr." are citations to the transcript of the evidentiary hearing in this matter, held from October 31, 2016 through December 1, 2016. The transcript, in 17 volumes, is included on the docket at entries 612-28. The Special Master's docket and electronic copies of all public filings included therein are accessible on the internet at http://www.pierceatwood.com/floridavgeorgia142original. A hard copy of the docket sheet itself, as of January 27, 2017, is attached to this report as Appendix A. Citations to "Dkt. No. __" are citations to filings included in the docket.

[3] A map of the Basin is included with this Report as Appendix B.

[4] Dr. Hornberger, an expert hydrologist testifying on behalf of Florida, is a Professor of Civil and Environmental Engineering and Earth and Environmental Sciences at Vanderbilt University. He has a Ph.D. in hydrology from Stanford University, and is

Georgia withdraws substantial amounts of water from the Chattahoochee River for municipal and industrial water supply in the Atlanta metropolitan area. (Mayer Direct,[5] at ¶¶ 21, 24-25, 35; Zeng Direct,[6] at ¶¶ 18, 30-32). The Flint River, a significant source of irrigation water in southern Georgia, arises in the metropolitan Atlanta area and flows about 350 miles southward to join the Chattahoochee River at Lake Seminole. (JX124, at 2-17; Hornberger Direct, at ¶¶ 31, 77; Zeng Direct, at ¶¶ 18, 63). Downstream of Lake Seminole, the Apalachicola River flows south across Florida's panhandle and feeds into the Apalachicola Bay at the Gulf of Mexico. (JX124, at 2-22). The Basin drains over 19,500 square miles in parts of Georgia, Alabama, and Florida. (*Id.* at ES-1).

Both the Chattahoochee River and the Flint River are affected, though to differing degrees, by dams operated by the Corps, as well as eleven non-federal

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the lead author of a hydrology textbook. (Hornberger Direct, at ¶¶ 4-9).

[5] Mr. Mayer, Georgia's expert in civil engineering and municipal and industrial water use, is a civil engineer and licensed Professional Engineer who provides expert analysis and consulting services to municipalities and public water systems regarding water conservation, drought response, and municipal and industrial water use, among other things. Mr. Mayer has over twenty years of experience analyzing urban water systems and demand management. (Mayer Direct, at ¶¶ 12-19).

[6] Dr. Zeng is Georgia's chief hydrologist, having served as the program manager of the Hydrological Analysis Unit of Georgia's Environmental Protection Division for the past ten years. He holds a Ph.D. in hydrology and water resources. (Zeng Direct, at ¶¶ 2-4, 9-14).

dams.[7] For most of its length, the Chattahoochee River is controlled by the Corps' dams. (JX124, at 2-15). The Corps operates five dams and four reservoirs on the Chattahoochee River (in downstream order): Lake Sidney Lanier and Buford Dam; West Point Lake and Dam; Walter F. George Lake and Dam; George W. Andrews Dam; and Lake Seminole and Jim Woodruff Dam. (*Id.* at 2-23, 2-26 – 2-46; GX544, at 4-9). The Flint River flows unimpeded by any dams operated by the Corps above Lake Seminole, flowing only through Jim Woodruff Dam before joining the Apalachicola River. (JX124, at 2-17). Three of the Corps' dams include significant reservoir storage, while the two dams furthest downstream, the George W. Andrews Dam and the Jim Woodruff Dam, are "run-of-river" projects (*i.e.*, they do not have appreciable storage to support project purposes). (*Id.* at 2-26 – 2-46; GX544, at 4-9). The Corps is supposed to operate these dams as a unified whole to achieve multiple objectives, including navigation, hydroelectric power generation, national defense, recreation, and industrial and municipal water supply. (JX124, at ES-1, 2-58 – 2-61; GX544, at 4-5, 17-18).[8] The Corps is also supposed to operate its system of dams and reservoirs in a manner that complies with various other federal statutory objectives, such as

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[7] A map of the dams in the Basin is included with this Report as Appendix C.

[8] *See* H.R. Doc. No. 342, 76th Cong., 1st Sess. 77 (1939); River and Harbor Act of 1945, Pub. L. No. 79-14, § 2, 59 Stat. 10, 17 (1945); River and Harbor Act of 1946, Pub. L. No. 79-525, § 1, 60 Stat. 634, 635 (1946); Flood Control Act of 1962, Pub. L. No. 87-874, § 203, 76 Stat. 1173, 1182 (1962).

conservation of fish and wildlife, water quality, and protection of threatened or endangered fish and wildlife. (JX124, at ES-1, 2-58 – 2-61; GX544, at 4-5).[9] Like George W. Andrews Dam and Jim Woodruff Dam, the non-federal dams along the Chattahoochee River and Flint River are "run-of-river" projects and do not permit significant storage. (GX544, at 9-12).

The Apalachicola River, which is unimpeded by any dams, flows southward from the Jim Woodruff Dam for approximately 106 miles before emptying into Apalachicola Bay.[10] (JX124, at 2-22; Steverson Direct,[11] at ¶ 12; Hoehn Direct,[12] at ¶ 15). The River is typically divided into four "reaches" from north to south – the Upper Reach, the Middle Reach, the Lower Reach, and the Tidal Reach – and is characterized by not only a traditional river channel but also a floodplain of up to five miles in width. Generally speaking, the River and its floodplain are narrower in the upper reaches and

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[9] *See, e.g.*, Endangered Species Act, 16 U.S.C. § 1531 *et seq.*; Flood Control Act of 1944, 16 U.S.C. § 560d; Water Supply Act of 1958, 43 U.S.C. § 390b.

[10] A map of the Apalachicola River is included with this Report as Appendix D.

[11] Mr. Steverson served as the Secretary of the Florida Department of Environmental Protection beginning in December 2014. Mr. Steverson was previously the Executive Director of the Northwest Florida Water Management District, which includes the Basin. (Steverson Direct, at ¶¶ 1, 5-6).

[12] Mr. Hoehn is a senior biologist for the Florida Fish and Wildlife Conservation Commission. He is responsible for assisting in the development of plans to maintain and restore wildlife habitats in the Basin. (Hoehn Direct, at ¶¶ 7, 9).

wider in the lower reaches, and the floodplain is criss-crossed by tributaries, sloughs, and swamps. Sloughs are natural channels cut through the river levee that are fed by the River (when connected by adequate streamflow). These sloughs often meander through the floodplain forests and swamps only to return to the River in a loop pattern. (Hoehn Direct, at ¶¶ 11, 17-26). The River, along with its associated floodplain and network of sloughs, sustains a unique ecosystem. (*Id.* at ¶¶ 29-36; Steverson Direct, at ¶¶ 9-10). This ecosystem is home to the highest species density of amphibians and reptiles in all of North America, and supports hundreds of endangered or threatened animal and plant species. (Steverson Direct, at ¶¶ 9-10). The River and its floodplain host numerous freshwater mussel species, including three federally-listed mussels (the endangered fat threeridge, threatened purple bankclimber, and threatened Chipola slabshell) that live in or along the side channels and sloughs of the River. (Hoehn Direct, at ¶ 31). Threatened Gulf sturgeon make their home in the River, and the upper Tidal Reach is home to Tupelo swamps. (*Id.* at ¶¶ 22, 32).

Discharge from the Basin into the Apalachicola River supports another unique ecosystem – Apalachicola Bay.[13] The Bay, a wide, shallow estuary along the Gulf Coast, is one of the largest estuaries in the southeastern United States and is one of the most productive estuaries in the northern hemisphere. It is a major fishery resource for oysters, shrimp, and finfish.

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[13] A map of Apalachicola Bay is included with this Report as Appendix E.

(JX124, at 2-22, 2-56 – 2-57, 2-204 – 2-205). The Bay is an "ideal" place for oysters to thrive, given its characteristics. (Ward Direct,[14] at ¶ 11). Flow from the River into the Bay helps maintain lower salinity in the Bay, a necessary condition for the Bay's oyster population, and provides essential nutrients to the Bay as well. (Berrigan Direct,[15] at ¶¶ 38-39). River flow is the primary determinant of salinity in the Bay. (JX124, at 2-56, 2-206). The Bay has historically been an extraordinarily productive oyster habitat, producing ninety percent of Florida's oyster harvest and ten percent of the nation's oyster harvest. (Steverson Direct, at ¶¶ 10, 26). Apalachicola oysters are widely recognized for their quality and have significant commercial harvest value. (Kimbro Direct,[16] at ¶¶ 16-17; Ward Direct, at ¶¶ 10-11). Given the historic productivity of the Bay and the prohibition on mechanical harvesting of oysters, the Bay supports a distinctive culture and fishery built around the harvesting of oysters by hand from

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[14] Mr. Ward, a fact witness for Florida, is a third-generation oyster dealer in Apalachicola, Florida. He holds the largest private oyster leases in the Bay, and is the former President of the Apalachicola Bay Oyster Dealers Association. (Ward Direct, at ¶¶ 1-3, 13-19).

[15] Mr. Berrigan is a former senior biologist at the Florida Department of Natural Resources, and was the primary oyster biologist for the State of Florida for thirty years. (Berrigan Direct, at ¶¶ 8-11).

[16] Dr. Kim[illegible]o, Florida's expert in ecology, is an Assistant Professor in the Department of Marine and Environmental Sciences at Northeastern University. Dr. Kimbro holds a Ph.D. in Ecology from the University of California at Davis. (Kimbro Direct, at ¶¶ 9-10).

small boats. (Steverson Direct, at ¶¶ 27-28; Ward Direct, at ¶¶ 12-18). The harvesting and sale of shrimp, crab, fish, and oysters is the primary economy in the Apalachicola Region. (JX124, at 2-205). Reflecting the importance and unique characteristics of the Bay, nearly 235,000 acres of public lands and water encompassing the Bay and the lower portion of the River have been set aside as the Apalachicola National Estuarine Research Reserve. (Steverson Direct, at ¶¶ 24-25; JX124, at 2-57).

B. Prior Proceedings

Florida and Georgia, as well as Alabama and the Corps, have been engaged in a decades-long dispute over the use and management of the waters of the Basin. From 1990 through 2012, Georgia, Florida, Alabama, and the Corps were involved in extensive multi-state and multi-district litigation relating to the Basin that ultimately culminated in two decisions by United States courts of appeals. A much simplified summary follows.

Litigation began in 1990, when Alabama filed a lawsuit against the Corps to prevent the Corps from reallocating storage in the Basin for municipal and industrial water supply in Georgia. (JX124, at 3-6 – 3-7). Alabama and the Corps jointly agreed to stay that proceeding and to seek to resolve the dispute through negotiations among Alabama, Georgia, Florida, and the

Corps. (Struhs Direct,[17] at ¶ 9). In 1992, these parties entered a Memorandum of Agreement ("MOA") specifying that a comprehensive study of the water resources in the Basin would be conducted in partnership among the States and the Corps. (JX124, at 3-6; GX544, at 13). The MOA also contained a "live and let live" provision permitting existing water users to reasonably increase water withdrawals for the period necessary to negotiate a solution to the water issues, but did not grant any vested right to such water use. (JX4).

In 1997, after five years of the parties' comprehensive study, the States and the federal government entered into the Apalachicola-Chattahoochee-Flint River Basin Compact, Pub. L. No. 105-104, 111 Stat. 2219 (1997) (the "Compact"). (JX124, at 3-6). Unlike most interstate compacts, the Compact did not lay out a formula for allocating the waters of the Basin; instead it set out a process for negotiations over such a formula to be completed by a set deadline. (FX209). Article I provided:

> This Compact among the States of Alabama, Florida and Georgia and the United States of America has been entered into for the purposes of promoting interstate comity, removing causes of present and future controversies, equitably apportioning the surface

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[17] Mr. Struhs was the Secretary of the Florida Department of Environmental Protection from 1999 to 2004, and acted as Florida's representative during interstate negotiations over the water of the Basin. (Struhs Direct, at ¶ 2).

> waters of the ACF, engaging in water planning, and developing and sharing common data bases.

(*Id.*) The Compact also included a "live and let live" provision like the one included in the MOA. (*Id.*) Lengthy negotiations followed, and the deadline was extended by agreement on numerous occasions. Ultimately, however, the negotiations collapsed and the Compact expired in August 2003. (JX124, at 3-6 – 3-7; GX544, at 14; Struhs Direct, at ¶ 16).[18] The war continued.

In 2000, while Compact negotiations were still ongoing, Southeastern Federal Power Customers, Inc. ("SeFPC") sued the Corps, alleging that the use of water from Lake Lanier for water supply purposes was not authorized. (JX124, at 3-8; GX544, at 14-15). After mediation in which Georgia joined, the Corps entered a Settlement Agreement that required the Corps to enter into long-term contracts for water supply. (JX124, at 3-8; GX544, at 15; Reheis Direct,[19] at ¶ 69; Struhs

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[18] The circumstances surrounding the collapse of the States' negotiations were the subject of extensive testimony and controversy at trial. Rehashing this evidence is unnecessary; it suffices to say that Florida and Georgia trade mutual accusations and recriminations over the cessation of negotiations. Regardless of which State is responsible for the Compact's expiration, it is apparent that both States have allowed acrimony and accusations of bad faith to permanently poison their approach to management of the waters of the Basin.

[19] Mr. Reheis served as Director of the Environmental Protection Division of Georgia's Department of Natural Resources from 1991 until July 2003. (Reheis Direct, ¶¶ 1, 6).

Direct, at ¶ 39). In 2008, the United States Court of Appeals for the D.C. Circuit ultimately held that the Settlement Agreement was invalid as exceeding the Corps' authority. *Se. Fed. Power Customers, Inc. v. Geren*, 514 F.3d 1316, 1325 (D.C. Cir. 2008).

In the meantime, several suits relating to the operations of the Corps in the Basin – including the original lawsuit filed by Alabama against the Corps as well as other lawsuits filed by Florida and Georgia – were transferred to the United States District Court for the Middle District of Florida in 2007 as MDL 1824. (JX124, at 3-9 – 3-10). In 2008, the case involving the SeFPC and the Corps was also transferred to MDL 1824 after remand from the D.C. Circuit. (GX544, at 15-16). After several years of litigation, the United States Court of Appeals for the Eleventh Circuit held that the Corps had the authority to allocate substantial quantities of storage in Lake Lanier for purposes of water supply for the Atlanta metropolitan area. *In re MDL-1924 Tri-State Water Rights Litig.*, 644 F.3d 1160, 1205 (11th Cir. 2011).

With the resolution of the cases involving the Corps' authority and operations in the Basin, the Corps subsequently undertook efforts to issue a new manual governing its operations in the Basin. (GX544, at 1, 17). Florida then brought this suit, invoking the Court's original jurisdiction to equitably apportion the waters of the Basin.

III. PLEADINGS

Florida filed its Motion for Leave to File a Complaint, Complaint, and Brief in Support of Motion on October 1, 2013. In the Complaint for Equitable Apportionment and Injunctive Relief accompanying its motion and subsequently entered on the Special Master's docket on November 3, 2014, Florida alleges that it has suffered serious harm to its ecology and economy because of reduced flows in the River resulting from Georgia's increasing consumption of water from the Basin for municipal, industrial, and agricultural uses. (Complaint at ¶¶ 5-7, 21, 42-43, 57-58, *Florida v. Georgia*, No. 142 Orig. (Nov. 3, 2014) (Dkt. No. 1) (hereinafter "Complaint" or "Compl.")).

Specifically, Florida alleges that "[m]aintaining an ample flow of water from the Chattahoochee and Flint River Basins is critical to preserving the ecology of the Apalachicola Region." (Compl. at ¶ 24). According to Florida, the Apalachicola River supports a significant floodplain forest as well as a large number of freshwater fish, mussel, and plant species. (*Id.* ¶¶ 25-26). Florida further alleges that the Apalachicola Bay "has been historically one of the most productive estuarine systems on the Gulf Coast" (*id.* ¶ 27), and that the "environmental health of the Apalachicola Region directly affects the local economy and sociology," which is "highly dependent on the region's natural resources" (*id.* ¶ 30).

Florida alleges the following regarding changes in the Basin caused by Georgia's consumptive water use.

First, "Georgia's water storage and consumption upstream of the Apalachicola River in the Chattahoochee and Flint River Basins has reduced Apalachicola River flows entering Florida." (Compl. at ¶ 42). According to Florida, Georgia's municipal and industrial water use in the Chattahoochee River Basin, agricultural water use in the Flint River Basin, and evaporative losses from non-federal water impoundments are the cause of the reduced flows in the River. (*Id.* ¶¶ 44-49). Second, Georgia's water consumption has "diminished the amount of water entering Florida in spring and summer of drought years by as much as 3,000-4,000 cubic feet per second" ("cfs"), and that, in recent drought conditions, the average flow in the Apalachicola River has been less than 5,500 cfs from May through December, conditions "unprecedented before 2000." (*Id.* ¶ 50). Third, the effect of Georgia's water use is particularly evident during low-flow periods. (*Id.* ¶ 21).

Florida alleges that these "exceptionally low" flows have been "extremely harmful" to the Apalachicola Region. (Compl. at ¶ 55). Specifically, Florida claims that low flows are "damag[ing] numerous species and habitats in the Apalachicola Region's ecosystem, and the overall economic, environmental, and social health and viability of the region" (*id.* ¶ 42; *see id.* ¶¶ 6-7, 43, 54); that the reduced flows have increased salinity levels in the Bay, resulting in a collapse in Florida's oyster industry (*id.* ¶ 56); that low flows have harmed threatened mussel species and Gulf sturgeon in the River (*id.* ¶ 58); and that "[a]s Georgia's water uses grow, the

amount of water entering Florida will continue to decrease, essential fish and wildlife habitats will constrict, and Florida will suffer additional irreparable harm" (*id.* ¶ 59).

As a remedy, Florida requests that the Court "enter a decree equitably apportioning the waters of the ACF Basin." (Compl., Prayer for Relief). In its Complaint, Florida asks the Court to "cap[] Georgia's overall depletive water uses at the level then existing on January 3, 1992," as well as "any other relief that the Court may deem just and appropriate." (*Id.*).

Georgia opposed Florida's motion for leave to file its Complaint, contending that Florida's claims were of insufficient significance to warrant further proceedings before the Court. Georgia also contended that, to the extent Florida has suffered harm, any harm resulted from the activities of the Corps and cannot be remedied except by alterations in the operations of the Corps' dams and reservoirs on the Chattahoochee River. (*See* State of Georgia's Opposition to Florida's Motion for Leave to File a Complaint, *Florida v. Georgia*, No. 142 Orig. (Jan. 31, 2014)).

By order dated November 3, 2014, the Court granted Florida's motion for leave to file. *Florida v. Georgia*, 135 S. Ct. 471 (2014). The Court subsequently appointed me "to fix the time and conditions for the filing of additional pleadings, to direct subsequent proceedings, to summon witnesses, to issue subpoenas, and to take such evidence as may be introduced and

such as he may deem it necessary to call for." *Florida v. Georgia*, 135 S. Ct. 701 (2014).

IV. COURSE OF PROCEEDINGS BEFORE THE SPECIAL MASTER

The proceedings before me commenced with an initial telephone conference with counsel for the parties and the United States[20] on December 1, 2014 and concluded with an evidentiary hearing held from October 31, 2016 through December 1, 2016, followed by post-trial briefing that was completed by December 29, 2016. The conduct of discovery, the filing and resolution of motions, and the conduct of evidentiary hearings proceeded in accordance with a series of Case Management Orders ("CMOs") and a Case Management Plan ("CMP"), as reflected on the docket.

Florida submitted its Complaint on November 3, 2014, and Georgia filed its Answer on January 8, 2015. (*See* Compl. (Nov. 3, 2014) (Dkt. No. 1); Answer (Jan. 8, 2015) (Dkt. No. 15)). I permitted Georgia to file a motion to dismiss Florida's Complaint based on Fed. R. Civ. P. 12(b)(7) by February 16, 2015. (*See* CMO No. 3 (Jan. 30, 2015) (Dkt. No. 23)). Georgia timely filed its motion to dismiss Florida's Complaint for failure to join the United States as a required party under Fed. R. Civ. P. 19. Thereafter, I also directed the parties to brief the issue of whether Alabama was a required party under Rule 19 and permitted both the United

[20] The United States has participated only as *amicus curiae* and did not actively participate during discovery or trial.

States and Alabama to submit *amicus* briefs. (*See* CMO No. 5 (Feb. 23, 2015) (Dkt. No. 52); CMO No. 7, ¶ 2 (Apr. 8, 2015) (Dkt. No. 99)). The parties fully briefed these issues, and both the United States and Alabama submitted *amicus* briefs. I held a hearing on the motion on June 2, 2015. Subsequently, on June 19, 2015, I issued an order denying Georgia's motion and concluding that, on the record as it then stood, Georgia had not carried its burden of proof under Rule 19. I also concluded that Alabama need not be joined under Rule 19. (*See* Order on State of Georgia's Motion to Dismiss for Failure to Join a Required Party (June 19, 2015) (Dkt. No. 128)).

Specifically, in that Order I found as follows. I concluded that Georgia, as the moving party, bore the burden to show: (1) that the nature of the interest possessed by the United States, as the absent party, meant that the United States should be joined if feasible; and (2) if the United States should but could not be joined, that the United States or the parties would be so prejudiced by continuance of the action as to justify dismissal. (*See* Order on Motion to Dismiss, at 7). I further concluded that the factual allegations of the Complaint must be presumed true and that all reasonable inferences had to be drawn in favor of the non-moving party. (*Id.*). Applying this standard of review, I found that the United States should (but could not) be joined because there was a "real possibility that a judgment might impede the United States' ability to protect its interest in managing the flow of water in the Chattahoochee River," given that the Corps operates dams

and reservoirs along that river and, in so doing, must comply with various statutory objectives and mandates. (*Id.* at 9 (quotation marks and alterations omitted); *see id.* at 11). However, I also found that Georgia failed to prove that the action could not proceed in equity and good conscience. (*Id.* at 11). Accepting the facts as pled in the Complaint and drawing all reasonable inferences in favor of Florida, I concluded that it might be possible to shape a remedy that would afford Florida adequate relief absent the United States as a party by entering an order capping Georgia's consumption of water. (*Id.* at 12). I found it "plausible" that increased streamflow in the Chattahoochee River resulting from a cap would increase the amount of water in the Apalachicola River without a change in the Corps' operations because: (1) under its general operational protocols, the Corps could match increased inflows into Lake Seminole with increased releases from the Jim Woodruff Dam into the Apalachicola River; and (2) a reduction in Georgia's consumption would render periods of reduced flow under the Corps' drought operations fewer and further between. (*Id.* at 14-16). I observed that Georgia had failed to provide any evidence rebutting these reasonable inferences, and I therefore had to "assume" that these inferences were true. (*Id.* at 13, 15-16). I also observed, however, that at trial Florida would have to carry the burden of proof on this point. (*Id.* at 16 & n.6). I then went on to conclude that entry of a decree capping Georgia's consumption would not prejudice the rights of the United States or the parties, and that Florida would have no other adequate remedy if this original jurisdiction

proceeding were dismissed at the pleading stage. (*Id.* at 16-21). In short, I observed that, "at least as far as the record has so far been developed, the [United States is] not proven to be indispensable whereby the cause has to be dismissed." (*Id.* at 22 (quoting *Francis Oil & Gas, Inc. v. Exxon Corp.*, 661 F.2d 873, 879 (10th Cir. 1981))). I also concluded that the case should not be dismissed for failure to join Alabama as a party because Alabama was not a required party and was not at risk of prejudice. (*Id.* at 22-24).

Beginning before and continuing during and after the pendency of Georgia's motion, the parties conducted written discovery and depositions. Discovery proceeded in accord with a version of the Federal Rules of Civil Procedure modified to best fit this particular action. (*See* CMP, ¶ 5 (Dec. 3, 2014) (Dkt. No. 6)). The parties engaged in extensive discovery over the course of approximately eighteen months, including fact and expert discovery. Throughout this period, I heard and resolved various discovery disputes and held regular status conferences to keep abreast of the parties' progress in discovery. Discovery closed on August 5, 2016.

Throughout the discovery process, I repeatedly urged the parties to settle. The parties did agree to mediation, and I entered a confidentiality order to "facilitate an open exchange of information between the parties" and "promote the public interest in reaching a negotiated settlement of this complex and expensive proceeding." (CMO No. 8 (Apr. 13, 2015) (Dkt. No. 101)).

The parties dutifully reported conferences with a mediator, whose identity was not disclosed, but ultimately the mediation efforts were unsuccessful.

Commencing on October 31, 2016, and concluding on December 1, 2016, I conducted an evidentiary hearing. I set out the procedure for the evidentiary hearing in a CMO issued in advance of the hearing. (*See* CMO No. 20 (July 13, 2016) (Dkt. No. 454)). The evidentiary hearing was held in the United States Bankruptcy Court located in Portland, Maine. (*See* CMO No. 21 (July 27, 2016) (Dkt. No. 458)). The presentation of testimonial evidence and exhibits was conducted as follows.

First, the parties filed the direct testimony of all witnesses, except hostile witnesses, in writing in advance of the hearing. Forty-one different witnesses, twenty-five of whom were experts, submitted over 1,800 pages of pre-filed testimony.

Second, the parties filed their exhibits, including the written reports of their testifying experts, in advance of trial. The parties submitted over 2,400 exhibits in support of their written direct testimony, consisting of tens of thousands of pages of documentary evidence and expert reports, as well as extensive datasets. The printed exhibits fill more than sixty volumes.

Third, the parties submitted in writing their objections to pre-filed testimony and exhibits. Because there was no jury, I discouraged the filing of *Daubert* motions. Simply put, it made the most sense to hear the expert testimony and determine its relevance and

persuasiveness at trial, thereby mooting any need to resolve whether it was so inadequate as to be inadmissible. The parties accordingly filed only three motions *in limine* on *Daubert* grounds. I have denied all objections, including objections raised via *Daubert* motions, on the merits to the extent I rely on any testimony in this Report. I have denied all other objections as moot.

Fourth, at the hearing, each witness was called to the stand to affirm and offer his or her pre-filed testimony. Each witness would then be tendered for cross-examination, followed by re-direct and re-cross, if desired. At the conclusion of counsel's questioning, I then asked any questions that seemed necessary and appropriate. Thirty-two witnesses presented live testimony in this manner over the course of seventeen days. By agreement, the parties also presented six witnesses via videotaped deposition testimony. Both parties had the opportunity to identify relevant deposition excerpts from each of these witnesses to be played at trial. Further, the parties agreed to allow the written testimony of two witnesses to be submitted without cross-examination. (*See* Trial Witness List (Dec. 6, 2016) (Dkt. No. 576)).[21] I informed the parties at trial that I would not consider for purposes of my Report the testimony of the remaining witnesses who presented pre-filed direct testimony but who did not appear at the hearing to adopt their testimony and be subjected to cross-examination, and I have not done so.

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[21] A copy of the Trial Witness List is attached to this report as Appendix F.

The evidentiary presentation was supplemented by briefing both before and after hearing. In advance of the hearing, the parties submitted pretrial briefs laying out the legal and factual issues that would be addressed. I also permitted various third persons seeking to participate as *amicus curiae* to submit briefs in advance of the evidentiary hearing. (*See* Order on Motions for Leave to File *Amicus* Briefs (Sept. 21, 2016) (Dkt. No. 488)). A total of eleven *amicus* briefs were submitted, including one from the State of Colorado and one from the State of Alabama. After the hearing, the parties filed extensive post-trial briefs and reply briefs. At my request, the United States also submitted a post-trial *amicus* brief "addressing specifically the issue of the Army Corps of Engineers' operations in the ACF River Basin." (*See* Correspondence to M. Gray (Dec. 9, 2016) (Dkt. No. 577)). The post-trial briefs alone totaled over 230 pages.

Cognizant that the Supreme Court has "often expressed" its "preference that, where possible, States settle their controversies by 'mutual accommodation and agreement,'" *Arizona v. California*, 373 U.S. 546, 564 (1963) (quoting *Colorado v. Kansas*, 320 U.S. 383, 392 (1943)), I issued an order after close of briefing requiring the parties "to meet and confer . . . with the services of a mediator if at all possible," in a "good faith effort to reach a framework for settlement" of this equitable apportionment proceeding. (*See* CMO No. 22 (Jan. 3, 2017) (Dkt. No. 634)). I also instructed the parties to submit, by January 26, 2017, a confidential memorandum advising me regarding their efforts. At

the appointed date, the parties submitted a memorandum with separate statements summarizing their efforts. While a review of the parties' statements would lead any independent, objective person to conclude that the parties were describing entirely different mediations, what is unfortunately clear from the parties' memorandum is that this last effort to reach an amicable resolution of this complex equitable apportionment proceeding was unsuccessful.

V. APPLICABLE EQUITABLE APPORTIONMENT STANDARD

A. Relevant Considerations

"Equitable apportionment is the doctrine of federal common law that governs disputes between states concerning their rights to use the water of an interstate stream." *Colorado v. New Mexico*, 459 U.S. 176, 183 (1982) ("*Colorado I*"). As a threshold matter, equitable apportionment is only available to a state that has suffered "real and substantial injury" as a result of proposed or actual upstream water use. *Idaho v. Oregon*, 462 U.S. 1017, 1027 (1983) ("*Idaho II*"); *see Connecticut v. Massachusetts*, 282 U.S. 660, 672 (1931). Additionally, the injury must be redressable by the Court. *Idaho v. Oregon*, 444 U.S. 380, 392 (1980) ("*Idaho I*"); *see Washington v. Oregon*, 297 U.S. 517, 523 (1936). Beyond the requirement that the downstream state suffer an injury that can be redressed by a Court decree, however, the equitable apportionment inquiry is not "formulaic." *South Carolina v. North Carolina*,

558 U.S. 256, 271 (2010); *see New Jersey v. New York*, 283 U.S. 336, 343 (1931).

Instead, "[i]t is a flexible doctrine which calls for 'the exercise of an informed judgment on a consideration of many factors' to secure a 'just and equitable' allocation." *Colorado I*, 459 U.S. at 183 (quoting *Nebraska v. Wyoming*, 325 U.S. 589, 618 (1945)); *see South Carolina*, 558 U.S. at 271; *Idaho II*, 462 U.S. at 1025. As the Court has explained, the factors relevant to equitable apportionment include

> physical and climatic conditions, the consumptive use of water in the several sections of the river, the character and rate of return flows, the extent of established uses, the availability of storage water, the practical effect of wasteful uses on downstream areas, [and] the damage to upstream areas as compared to the benefits to downstream areas if a limitation is imposed on the former.

Colorado I, 459 U.S. at 183 (quoting *Nebraska*, 325 U.S. at 618). Notably, the Court has also considered water quality and harm to wildlife and wildlife habitat – including the effect of increased salinity on oyster fisheries – in determining an equitable apportionment of water. *See New Jersey*, 283 U.S. at 345; *Nebraska v. Wyoming*, 515 U.S. 1, 12 (1995). These factors are not exhaustive; equitable apportionment requires consideration of "all . . . relevant facts." *Connecticut*, 282 U.S. at 670-71.

"The laws of the contending states concerning intrastate water disputes" are also an "important consideration governing equitable apportionment." *Colorado I*, 459 U.S. at 183. When both states share similar water law, that law "becomes the 'guiding principle'" – but not the controlling principle – "in an allocation between competing states." *Id.* at 183-84; *see Idaho II*, 462 U.S. at 1025 ("[A]pportionment is based on broad and flexible equitable concerns rather than on precise legal entitlements."); *Connecticut*, 282 U.S. at 670-71. Both Georgia and Florida are riparian states. *See, e.g.*, *Stewart v. Bridges*, 292 S.E.2d 702, 704 (Ga. 1982); *5F, LLC v. Dressing*, 142 So.3d 936, 939-40 (Fla. Dist. Ct. App. 2014). The fundamental characteristic of the riparian system is that "each riparian proprietor has an equal right to make a reasonable use of the waters of the stream, subject to the equal right of the other riparian proprietors likewise to make a reasonable use." *United States v. Willow River Power Co.*, 324 U.S. 499, 505 (1945). *See Colorado I*, 459 U.S. at 179 n.4 ("Under the riparian doctrine, recognized primarily in the eastern, midwestern and southern states, the owner of land contiguous to a watercourse is entitled to have the stream flow by or through his land undiminished in quantity and unpolluted in quality, except that any riparian proprietor may make whatever use of the water that is reasonable with respect to the needs of other appropriators."); Tarlock, *Law of Water Rights & Resources*, §§ 3:54, 3:60.[22] Accordingly, the relevant

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[22] This stands in contrast to the prior appropriation doctrine, where the "relative rights of water users are ranked in order of

guiding principle in this case is that Florida, as the downstream water user, is entitled to use of the River's flow subject to reasonable upstream consumptive uses. *See New Jersey*, 283 U.S. at 342-45 (equitable apportionment case involving riparian states). *Cf. Nebraska*, 325 U.S. at 618 (resolving equitable apportionment proceeding in light of prior appropriation law).

Given the framework established in the Court's equitable apportionment jurisprudence, there are two overarching questions that are relevant to Florida's entitlement to an equitable apportionment in this case. First, has Florida, as the State seeking an equitable apportionment, sustained "real and substantial injury" as a result of unreasonable upstream water use by Georgia? *Idaho II*, 462 U.S. at 1027; *New Jersey*, 283 U.S. at 342-43, 345. Second, will a consumption cap – the proposed remedy in this case – provide equitable redress for Florida's injury? *New Jersey*, 283 U.S. at 345; *Colorado I*, 459 U.S. at 187.

B. Burden of Proof

"The function of any standard of proof is to 'instruct the factfinder concerning the degree of confidence our society thinks he should have in the correctness of factual conclusions for a particular type

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their seniority." *Colorado I*, 459 U.S. at 179 n.4. That is, right to water in a prior appropriation state is "acquired and maintained by actual use." *Id.* Right to water in a riparian state, on the other hand, "originate[s] from land ownership and remain[s] vested even if unexercised." *Id.*

of adjudication.'" *Colorado v. New Mexico*, 467 U.S. 310, 315 (1984) ("*Colorado II*") (quoting *In re Winship*, 397 U.S. 358, 370 (1970) (Harlan, J., concurring)). "By informing the factfinder in this manner, the standard of proof . . . indicates the relative importance society attaches to the ultimate decision." *Id.* at 315-16. In equitable apportionment cases between two sovereign states, the Court requires proof by "clear and convincing" evidence. *Id.* at 316. Accordingly, equitable apportionment should be allowed only if the factfinder has an "abiding conviction" that the party bearing the burden of proof has shown "that the truth of its factual contentions are [sic] 'highly probable.'" *Id.* That is, the evidence presented by the party bearing the burden of proof must "instantly tilt[] the evidentiary scales" in that party's favor. *Id.* This heightened standard "is necessary to appropriately balance the unique interests involved in water rights disputes between sovereigns." *Id. See Colorado*, 320 U.S. at 393-94 (noting the "great and serious caution with which it is necessary to approach the inquiry whether a case is proved" in a dispute between sovereigns); *Connecticut*, 282 U.S. at 669.

While the parties vigorously contest whether Florida does or does not bear the burden of proof as to every element of the equitable apportionment inquiry, my findings in this case make it unnecessary to resolve this thorny dispute.[23] Instead, I need only address the

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[23] Florida argues that, once it has proven injury, the burden of proof shifts to Georgia (as the upstream State) to prove the reasonableness of its water use, while Georgia contends that the burden of proof remains on Florida (as the State seeking additional

narrow question of which party bears the burden of proving injury and redressability.

I conclude that Florida, as the aggrieved State, must prove "real and substantial" injury from Georgia's conduct by "clear and convincing evidence." *Idaho II*, 462 U.S. at 1027. This proposition is firmly established in the Court's jurisprudence. *See Colorado I*, 459 U.S. at 187 n.13; *Connecticut*, 282 U.S. at 669. In *Idaho II*, for instance, the Court observed that the burden of proof rested on Idaho, as the party claiming injury and seeking an equitable apportionment of fishery resources, to prove that Oregon had injured Idaho by overfishing the Columbia River and mismanaging the resource. *Idaho II*, 462 U.S. at 1028-29. Likewise, in *Washington*, the Court held that Washington, as the complainant, had the burden to prove that the water diverted by Oregon was "misapplied or wasted with ensuing loss to" Washington. *Washington*, 297 U.S. at 523-24. The same rule applies here.

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water by court decree) to prove not only that it has suffered injury but also that Georgia's water use is unreasonable such that a remedy would substantially outweigh any harm to Georgia. Both parties rely on *Colorado I*, which addressed the shifting of the burden of proof as between New Mexico and Colorado in an equitable apportionment proceeding involving two states that adhered to the prior appropriation doctrine. *See Colorado I*, 459 U.S. at 187 n.13. Applying the principles set out in *Colorado I* in the context of a dispute between riparian states is not an altogether straightforward exercise. However, because I find that Florida has failed to carry its burden of proof regarding an issue on which it incontrovertibly must bear the burden, I need not and do not resolve this issue.

I also conclude that Florida bears the burden to prove that the proposed remedy will provide redress for Florida's injury. As the Court observed in an earlier decision in the dispute between Idaho and Oregon, the party seeking an equitable apportionment must prove that the requested relief will justify placing limitations on another sovereign state. *Idaho I*, 444 U.S. at 392. In *Idaho I*, the Court noted that, because Idaho had narrowed its requested equitable remedy in order to avoid the need to join the United States as a party, Idaho bore the burden of proving that its alleged harm would be remedied by a decree binding only Oregon and Washington (and not the United States). *Id.* In *Washington*, the Court dismissed the claim brought by Washington because it had not proved that any additional water not consumed by Oregon would reach Washington. *See Washington*, 297 U.S. at 523. Thus, Florida must prove that any water not consumed by Georgia as the result of a decree imposing a consumption cap will reach Florida and alleviate Florida's injury.

VI. ANALYSIS

After hearing extensive testimony bearing on numerous issues and reviewing the parties' briefing, I have concluded that there is a single, discrete issue that resolves this case: even assuming that Florida has sustained injury as a result of unreasonable upstream water use by Georgia, can Florida's injury effectively be redressed by limiting Georgia's consumptive use of water from the Basin without a decree binding the

Corps? I conclude that Florida has not proven that its injury can be remedied without such a decree. The evidence does not provide sufficient certainty that an effective remedy is available without the presence of the Corps as a party in this case. I explain the rationale for this conclusion below. Before turning to that question, however, I provide the Court a brief descriptive background regarding the harm suffered by Florida and the unreasonableness of Georgia's consumptive water use.

A. Background Regarding Florida's Harm and Georgia's Water Use

The facts presented at trial demonstrate the gravity of the dispute between Florida and Georgia. As the evidentiary hearing made clear, Florida points to real harm and, at the very least, likely misuse of resources by Georgia.

There is little question that Florida has suffered harm from decreased flows in the River. Florida experienced an unprecedented collapse of its oyster fisheries in 2012. (Berrigan Direct, at ¶¶ 26-31). In late 2012, oyster mortality reached devastating levels, leaving many previously-productive oyster reefs virtually empty. (*Id.* at ¶¶ 30-31). This was true not only of oyster reefs open to public harvesting, but also oyster reefs subject to private commercial leases. (Ward Direct, at ¶¶ 27-29, 32; Kimbro Direct, at ¶ 34). As explained by Florida's expert, Dr. David Kimbro, and as the National Oceanic and Atmospheric Administration ("NOAA") concluded when it issued a fishery disaster

determination for the Bay in 2013, the oyster collapse came as a result of increased salinity in the Bay caused by low flows in the River. (Kimbro Direct, at ¶¶ 4, 101; Sutton Direct,[24] at ¶ 48; FX413, at NOAA-22896-97; FX 412, at NOAA-3818; *see also* Berrigan Direct, at ¶¶ 36-49). Salinity is one of the major limiting factors in oyster production. (JX124, at 2-206). In 2012, high salinity in the Bay from reduced streamflow allowed marine predators to invade the Bay in unprecedented levels, preying on the Bay's oyster population. (Berrigan Direct, at ¶¶ 42-46; Ward Direct, at ¶¶ 33-37). While Georgia points to potential mismanagement of oyster resources (*e.g.*, overfishing and insufficient "shelling" of oyster reefs[25]) as a cause of the collapse, the evidence presented tends to show that increased salinity rather than harvesting pressure led to the collapse. (Berrigan Direct, at ¶¶ 50-60; JX50; JX77; Ward Direct, at ¶ 41). The oyster collapse has greatly harmed the oystermen of the Apalachicola Region, threatening their long-term sustainability. (Ward Direct, at ¶¶ 24-29, 42).

It also appears that Georgia's upstream agricultural water use has been – and continues to be – largely unrestrained. Agricultural irrigation has increased dramatically in Georgia since 1970. By Florida's count,

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[24] Mr. Sutton is the Assistant Executive Director of the Florida Fish and Wildlife Conservation Commission. (Sutton Direct, at ¶ 2).

[25] "Shelling" involves building a substrate of processed or fossil oyster shell to provide habitat for oyster reproduction. Shelling can significantly increase oyster productivity under favorable conditions, but cannot counteract high salinity conditions. (Berrigan Direct, at ¶¶ 61-63; Ward Direct, at ¶ 41).

Georgia's irrigated acreage has increased from under 75,000 acres in 1970 to more than 825,000 acres in 2014. (Hornberger Direct, at ¶ 77). Georgia's own estimates show a dramatic growth in consumptive water use for agricultural purposes. (Zeng Direct, at ¶¶ 63-64). In the face of this sharp increase in water use, Georgia has taken few measures to limit consumptive water use for agricultural irrigation. Agricultural permits contain no limitations on the amount of irrigation water that can be used by farmers. (Tr. vol. IX, at 2223-24 (Cowie)).[26] Even the exceedingly modest measures Georgia has taken have proven remarkably ineffective. For instance, although Georgia adopted the Flint River Drought Protection Act ("FRDPA"), Ga. Code Ann. § 12-5-540 *et seq.*, in order to permit the State temporarily to "buy back" agricultural irrigation rights at auction and thereby reduce water use during droughts, Georgia failed to implement the FRDPA's auction in 2011 and 2012 during one of the worst droughts on record. (Turner Direct,[27] at ¶¶ 85-95; Tr. vol. IX, at 2259-60 (Cowie); FX81; Tr. vol. XII, at 2999 (Turner); JX69). Despite early warnings of oncoming drought, Georgia's Environmental Protection Division (the "EPD") chose not to declare a drought in 2011 – apparently hoping for the best, and clearly not wishing to incur the cost of preventative action given lack of funding. (Turner

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[26] Dr. Cowie is the Assistant Branch Chief of the Watershed Protection Branch at the Georgia Environmental Protection Division. (Cowie Direct, at ¶¶ 1, 3-4).

[27] Mr. Turner served as Director of Georgia's Environmental Protection Division from January 1, 2012 through June 1, 2016. (Turner Direct, at ¶ 5).

Direct, at ¶ 87; FX78; Tr. vol. IX, at 2258-59 (Cowie)). Then, in 2012, the EPD conveniently took the position that implementing the FRDPA would be "too little, too late" – despite lacking scientific support for that conclusion. (Turner Direct, at ¶ 91; JX69; Tr. vol. XIII, at 3252-56 (Zeng); Tr. vol. XII, at 3081-82 (Turner)). Georgia then continued to issue backlogged irrigation permit applications, issuing only a temporary moratorium on new applications. (Tr. vol. XII, at 3089-90 (Turner)). Georgia's position – practically, politically, and legally – can be summarized as follows: Georgia's agricultural water use should be subject to no limitations, regardless of the long-term consequences for the Basin.[28]

Much more could be said and would need to be said on these issues (as well as other issues, such as causation) were Florida and Georgia the only parties whose activities were implicated in this action. However, they are not. As already described, the Corps also conducts significant operations in the Basin. Regardless of the harm suffered by Florida and the unreasonableness of Georgia's agricultural water use, it is necessary to determine whether the activities of the Corps render uncertain any relief to Florida stemming from a Court decree capping Georgia's consumptive water use. It is to this issue that I now turn.

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[28] It is less clear that Georgia's municipal and industrial water use is unreasonable. Georgia appears to have taken significant steps to conserve water in the Atlanta metropolitan region – though only after having been spurred to take such steps by adverse litigation results. (Turner Direct, at ¶¶ 66-83).

B. The Corps' Operational Protocols for Its Projects in the Basin

In seeking relief from the Court in this original jurisdiction proceeding, Florida maintains that water not consumed by Georgia as a result of a consumption cap will reach the River and will alleviate the harm Florida has suffered. Georgia argues that, regardless of any harm suffered by Florida as a result of Georgia's consumptive water use, equitable apportionment is not justified in this case because any water not consumed by Georgia that results in additional streamflow would not necessarily reach Florida in a timely manner but could – indeed, would – instead be held back by the Corps to satisfy project demands in the Basin. Accordingly, as stated above, the central question presented is whether the Corps' operations so regulate the water in the Basin that no effective remedy is possible without a decree binding the Corps.

In addressing this dispute, I first provide a brief summary of the Corps' reservoir projects and operations before considering the parties' contentions. The Corps describes its operations extensively in its Draft Environmental Impact Statement ("DEIS"), published in October 2015, as part of its revisions to its Master Water Control Manual ("WCM") for the Basin, which was submitted as a joint exhibit at trial. (JX124).[29]

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[29] On December 8, 2016, after the close of the evidentiary hearing in this proceeding, I received notice from the United States that the Corps had released its Final Environmental Impact Statement ("FEIS") and WCM for the Basin. (*See* Letter from Michael Gray (Dec. 8, 2016) (Dkt. No. 578)). The FEIS is available

Additional discussion is contained in the May 2012 Biological Opinion on the Jim Woodruff Dam Revised Interim Operating Plan ("RIOP"), as well as the September 2016 Biological Opinion for the WCM, both of which are also joint exhibits submitted at trial. (JX72; JX168). The parties also designated competing experts who described Corps operations. No representative of the Corps appeared at trial, although the United States submitted an *amicus* brief addressing Corps operations.

1. General Corps Operations

As stated above, the Corps operates five projects in the ACF River Basin. (JX124, at 2-23). The three northernmost reservoirs, Lake Lanier, West Point Lake, and Walter F. George Lake, are the only reservoirs with substantial conservation storage capacity. Approximately sixty-five percent of the Corps' usable reservoir storage is in the northernmost reservoir, Lake Lanier. Lake Lanier – which is used to supply water to the Atlanta metropolitan area – lies at the head of the Basin, and is fed by runoff from an area that

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on the Corps' website at: http://www.sam.usace.army.mil/Missions/Planning-Environmental/ACF-Master-Water-Control-Manual-Update/ACF-Document-Library/. I requested that the United States inform me, in its *amicus* brief, of any material changes to Corps operations from the operations described by the parties at trial. When the United States submitted its brief, it represented that the FEIS did not change the Corps' operations in a manner material to this case. I accordingly rely on the exhibits presented at trial, and take judicial notice of the FEIS to the limited extent it is relevant.

makes up seven percent of the Basin. (JX124, at 2-25; Shanahan Direct,[30] at ¶ 20). Approximately nineteen percent of system storage is in West Point Lake, with the remainder of the storage – approximately fifteen percent – in Walter F. George Lake. These two reservoirs are fed by runoff from an area consisting of thirty-one percent of the Basin. (JX124, at 2-25; Shanahan Direct, at ¶ 21). The remaining two projects, George W. Andrews Dam and Jim Woodruff Dam (along with its associated reservoir, Lake Seminole), do not have significant storage capacity and are referred to as "run-of-river" projects – meaning that they simply pass flows downstream without impounding the water for any appreciable length of time. (JX124, at 2-25; Bedient Direct,[31] at ¶ 21; Shanahan Direct, at ¶ 21). These two run-of-river projects are fed by runoff from the remaining sixty-two percent of the land area in the

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[30] Dr. Shanahan, Florida's primary expert on reservoir operations, is a consulting hydrologist and environmental engineer, and has held the role of Lecturer in the Department of Civil and Environmental Engineering at the Massachusetts Institute of Technology ("MIT"). He has a Ph.D. in Environmental Engineering from MIT, and has previously been the project engineer on Corps projects. (Shanahan Direct, at ¶¶ 9-15).

[31] Georgia expert Dr. Bedient is the Herman Brown Professor of Civil and Environmental Engineering at Rice University. He has a Ph.D. in Environmental Engineering from the University of Florida, and is a registered Professional Engineer. He has over forty years of experience performing hydrologic and hydraulic modeling of lakes and watersheds, and has extensive experience with federal reservoir projects. (Bedient Direct, at ¶¶ 6-12).

Basin. The water originating in this portion of the Basin is not regulated via storage reservoirs operated by the Corps. (Shanahan Direct, at ¶¶ 21-22).[32]

The Corps is supposed to operate its system of reservoirs as a unified whole in an effort to balance water control operations to meet each of the frequently competing project purposes to the greatest extent possible. (JX124, at 2-62; Bedient Direct, at ¶ 17; Shanahan Direct, at ¶ 24). The project purposes identified in federal law include flood control, hydropower, navigation, conservation of fish and wildlife, recreation, water supply, and preservation of water quality. (JX124, at 2-58 – 2-61; Bedient Direct, at ¶ 17; Shanahan Direct, at ¶ 24). Each of the project purposes is supposed to be considered by the Corps when making water management decisions affecting how water is stored and released. In general, to provide for these authorized project purposes, flow must be stored during wetter times of each year and released from storage during drier periods of each year. (Bedient Direct, at ¶ 17). Traditionally, that means that water is stored in the upstream storage lakes during the spring and released for authorized project purposes in the summer and fall months. (Shanahan Direct, at ¶ 25). The Corps is supposed to continuously monitor the total system water availability to ensure that project purposes can at least be minimally satisfied during critical drought periods. This water management strategy does not prioritize any

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[32] A map showing the drainage areas regulated by storage reservoirs operated by the Corps and the drainage area not regulated by storage reservoirs is attached hereto as Appendix G.

project function over another, but seeks to balance all project purposes. (JX124, at 2-63, 4-6, 5-26). Because the Corps operates its reservoirs as a unified system, releases from Jim Woodruff Dam reflect the "downstream end-result of system-wide operations." (JX72, at 7).

The Corps divides its three storage reservoirs into separate storage levels. The lowest level is the inactive pool, which is not used in any material way in the Corps' operations. No reservoir releases are made when a reservoir is below this level. Above the inactive pool is the conservation pool. The water in the conservation pool – the "conservation storage" that can be stored or released for project purposes – is utilized to support the Corps' project purposes.[33] The top of the conservation pool is defined by the Corps' "guide curves," the seasonally variable desired pool elevation in a reservoir that would allow the Corps to meet project purposes fully. The top-most pool is the flood risk pool, where water is stored when it cannot safely be passed downstream (for instance, during large storms). (JX124, at 2-25; Bedient Direct, at ¶ 22; Shanahan Direct, at ¶ 25; Tr. vol. XIII, at 3329-32 (Zeng)).[34] The Corps has stated that it operates its projects to "maintain a balanced use of conservation storage rather than

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[33] The sum of the available conservation storage in Lake Sidney Lanier, West Point Lake, and Walter F. George Lake is called the "composite conservation storage." (JX124, at 2-70 – 2-71; Bedient Direct, at ¶ 23).

[34] A depiction of the various storage pools in West Point Lake is included with this Report as Appendix H for illustrative purposes.

to maintain the pools at or above certain predetermined elevations." (JX124, at 5-26; Shanahan Direct, at ¶ 26). The Corps has also noted that it manages its reservoirs "to maintain a steady pool at as high a level as possible, consistent with other authorized purposes, particularly during [May through September]." (JX124, at 2-74 – 2-75; Bedient Direct, at ¶ 159).

The Corps has defined "action zones" for each of its storage reservoirs. Action zones are partitions of a reservoir's conservation storage, and are used to guide Corps operations as the Corps attempts to meet various project purposes during various hydrologic conditions. The Corps has stated that action zones are "used to manage the reservoirs at the highest level possible while balancing the needs of all the authorized purposes." (JX124, at 4-10). Each action zone has a set of operational rules that govern operations for the reservoir when the pool is within that zone. Zone 1, the highest action zone, is a level at which all federal project purposes can be satisfied. As lake levels decline, Zones 2 through 4 define increasingly critical system water shortages and guide the Corps in reducing flow releases resulting from dry or drought conditions, when project purposes can no longer fully be met. (JX124, at 2-25, 4-10; Bedient Direct, at ¶ 24; Shanahan Direct, at ¶ 27; Tr. vol. XIII, at 3333-34 (Zeng)).[35] When the composite conservation storage in the three reservoirs falls into Zone 4, the Corps institutes a set of rules known

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[35] A depiction of the action zones for West Point Dam and Lake is included with this Report as Appendix I for illustrative purposes.

as "drought operations." Under drought operations, a number of normal operating rules are supposed to be suspended and special operations apply for releases from Jim Woodruff Dam. Drought operations only conclude when composite conservation storage returns to Zone 1. (JX124, at 4-16; Shanahan Direct, at ¶ 28; Bedient Direct, at ¶ 25).

The Corps' storage projects are supposed to be operated to maintain lake level in the same zones concurrently. However, because of the hydrologic and physical characteristics of the system, there might be periods when one lake is in a different zone than another. When that occurs, the Corps is supposed to make an effort to bring the lakes back into balance with each other as soon as conditions permit. By doing so, effects on the Basin are generally shared among the projects and balance maintained. (JX124, at 4-11; Shanahan Direct, at ¶ 27).

2. The Revised Interim Operating Plan

The Corps and the United States Fish and Wildlife Service ("USFWS") cooperatively developed the RIOP for Jim Woodruff Dam, issued in May 2012, to guide the Corps' operations and releases from the system to produce flows from Jim Woodruff Dam. The RIOP establishes minimum flow rates at the Jim Woodruff Dam under varying conditions, as well as a maximum fall rate (the daily vertical drop in the river stage), in order to minimize the impact of Corps operations on

downstream listed species in Florida. (JX124, at 2-70; Bedient Direct, at ¶ 18; Shanahan Direct, at ¶ 32).

The RIOP ties releases from Jim Woodruff Dam into Florida to: (1) the time of year; (2) the composite conservation storage in the Corps' three storage reservoirs; and (3) total inflow to the Basin. (JX124, at 2-70 – 2-71; Shanahan Direct, at ¶ 32; Bedient Direct, at ¶ 34). There are three seasons under the RIOP – spawning season (March through May), non-spawning season (June through November), and winter (December through February). (JX124, at 2-71 – 2-72). As described above, there are also four action zones and a drought zone based on the composite conservation storage available in the Corps' reservoirs. (*Id.* at 4-10). Finally, there are ranges of Basin inflows, "Basin inflow" being defined as the amount of water that would flow by Jim Woodruff Dam if all of the Corps' reservoirs were kept at their then-existing surface elevation. (*Id.* at 4-24; JX72, at 8).

The chart summarizing the RIOP rules for Jim Woodruff Dam is reproduced on the next page.

May 2012 RIOP for Jim Woodruff Lock and Dam, Apalachicola River Minimum Discharge from Woodruff Lock and Dam by Month and by Basin Inflow (BI) Rates

Months	Composite conservation storage zone	Basin inflow (BI) (cfs)	Releases from Jim Woodruff Lock and Dam (cfs)	BI available for storage[a]
March-May	Zones 1 and 2	≥34,000 ≥16,000 and <34,000 ≥5,000 and <16,000 >5,000	≥25,000 ≥16,000+50% BI>16,000 ≥BI ≥5,000	Up to 100% BI>25,000 Up to 50% BI>16,000
	Zone 3	≥39,000 ≥11,000 and <39,000 ≥5,000 and <11,000 <5,000	≥25,000 ≥11,000+50% BI>16,000 ≥BI ≥5,000	Up to 100% BI>25,000 Up to 50% BI>11,000
June-November	Zones 1, 2, and 3	≥22,000 ≥10,000 and <22,000 ≥5,000 and <10,000 <5,000	≥16,000 ≥10,000+50% BI>10,000 ≥BI ≥5,000	Up to 100% BI>16,000 Up to 50% BI>10,000
December-February	Zones 1, 2, and 3	≥5,000 <5,000	≥5,000 (Store all BI>5,000) ≥5,000	Up to 100% BI>5,000
At all times	Zone 4	NA	≥5,000	Up to 100% BI>5,000
At all times	Drought Zone	NA	≥4,500[b]	Up to 100% BI>4,500

Sources: USACE, Mobile District 2012; USFWS 2012

Notes:

[a] Consistent with safety requirements, flood risk management purposes, and equipment capabilities.

[b] Once composite conservation storage falls below top of Drought Zone, ramp-down to 4,500 cfs will occur at a rate of 0.25 ft/day.

(JX124, at 2-71; *see also* JX72, at 13). The flow rates included in the table are minimum flow rates, rather than specific outflow rates. The symbol "≥" indicates "greater than or equal to." (Shanahan Direct, at ¶ 33).

Under the RIOP, the amount of water released and stored varies depending on the above factors. Depending on Basin inflow, the composite storage zone, and the time of year, certain minimum releases are required at Jim Woodruff Dam. (JX124, at 2-70 – 2-71; Shanahan Direct, at ¶ 32; Tr. vol. XIII, at 3334-35 (Zeng)). When composite conservation storage is in Zones 1, 2, or 3, the Corps is operating normally, and the amount of water released from Jim Woodruff Dam is generally a product of the time of year and the Basin inflow. (Bedient Direct, at ¶ 36). Once composite conservation storage falls into Zone 4, drought contingency operations are triggered. (JX124, at 2-71; Bedient Direct, at ¶¶ 25, 36).

During drought operations, minimum discharge is determined in relation to composite conservation storage, not Basin inflow. The minimum required flow at Jim Woodruff Dam during drought operations is 5,000 cfs; when storage falls below Zone 4, triggering exceptional drought operations, the minimum flow is lowered to 4,500 cfs. These minimum flows are required, even if inflow into the Basin is less than 5,000 cfs. The Corps may store all Basin inflow exceeding minimum releases during drought operations. Drought operations remain effective until upstream federal reservoirs' composite storage level returns to Zone 1; exceptional

drought operations last only during the period of time in which composite storage is below Zone 4. (JX124, at 2-73 – 2-74, 4-16 – 4-17; Bedient Direct, at ¶¶ 25, 36).[36]

The RIOP also specifies the amount of Basin inflow available for storage. Depending on Basin inflow, season, and conservation storage, the RIOP sets several threshold storage ranges. At times, the Corps will augment flows into Florida by releasing more than Basin inflow, such as when Basin inflow is below 5,000 cfs; at other times, the Corps will match releases from Jim Woodruff Dam with Basin inflow, or may store up to fifty percent or even one hundred percent of Basin inflow. (JX124, at 2-71; Bedient Direct, at ¶ 39).

3. The Proposed Water Control Manual

The Corps' proposed WCM retains the same basic framework established in the Corps' existing protocols, including the RIOP, although it sets out a few changes. Significantly, drought operations would begin earlier, in Zone 3 rather than Zone 4. (FEIS, at 5-54 – 5-55). However, the proposed WCM also sets out revised action zones to be used for managing the reservoirs. (*Id.* at 5-52). The proposed WCM would reduce the total amount of time the reservoirs are in Zones 3 and 4. (*Id.* at 6-102 – 6-103). These proposed changes "could trigger slightly constrained operations more frequently

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[36] It is also possible to have required minimum flows of 5,000 cfs even if the Corps is not in drought operations. When Basin inflow is less than 5,000 cfs, regardless of the composite conservation storage zone, the Corps is required to release a minimum of 5,000 cfs from Jim Woodruff Dam. (Tr. vol. XIII, at 3337-38 (Zeng)).

and over slightly longer periods, and the extent of those constrained operations would gradually increase as worsening drought conditions may dictate over time." (*Id.* at 6-99). Overall, however, the proposed WCM is "likely to have no appreciable incremental effect on flow conditions in the Apalachicola River compared to the [RIOP]." (*Id.* at 6-93). Accordingly, the proposed WCM does not materially affect the conclusion I reach based on the evidence presented at trial.

C. Effect of the Corps' Operational Protocols on the Availability of an Effective Remedy in this Proceeding

1. The States' Conflicting Claims

The parties dispute whether, given the Corps' operational protocols, any additional streamflow resulting from a reduction in Georgia's consumptive water use would alleviate Florida's harm. The parties' principal arguments are as follows.

Florida argues that, even though the Corps operates multiple reservoirs in the Basin, water from sixty-two percent of Georgia's Basin watershed flows into the Flint River or into the Chattahoochee River downstream from Walter F. George Dam, and is therefore not controlled in any meaningful way by the Corps' storage reservoirs. Florida contends the water from this portion of the Basin flows directly into Lake Seminole and that, because Lake Seminole and Jim Woodruff Dam is a run-of-river project, the water will necessarily flow into Florida with little interruption.

Florida further argues that, pursuant to the Corps' operating rules, the additional water from this portion of the Basin would not be "offset" by the Corps through the release of less water from Lake Lanier, West Point Lake, and Walter F. George Lake.

Georgia does not contest that Lake Seminole and Jim Woodruff Dam is a run-of-river project, but instead argues that the Corps would offset any increased flows from the Flint River into the Apalachicola River by withholding more water upstream in Lake Lanier, West Point Lake, and Walter F. George Lake. In Georgia's view, the activities of the Corps would preclude any increases in Basin inflow during low-flow conditions or drought operations from increasing state-line flows into Florida. Accordingly, Georgia asserts that the only reliable way to ensure additional flow into Florida from reduced consumptive water use would be to alter the Corps' operating rules.

2. Uncertainty Regarding the Availability of an Effective Remedy

I find that Florida has not proven by clear and convincing evidence that any additional streamflow in the Flint River or in the Chattahoochee River would be released from Jim Woodruff Dam into the Apalachicola River at a time that would provide a material benefit to Florida (*i.e.*, during dry periods), thereby alleviating Florida's injury. The evidence presented at trial does not "instantly tilt" the scale in favor of Florida. *See Colorado*, 467 U.S. at 316. The evidence instead tends to show that the Corps' operation of federal reservoirs

along the Chattahoochee River creates a "highly regulated system over much of the [B]asin" (GX544, at 2), rendering any potential benefit to Florida from increased streamflow in the Flint River uncertain and speculative.

a. Uncertainty Regarding the Availability of an Effective Remedy During Drought Operations or Low-Flow Conditions

The evidence presented at trial does not show with sufficient certainty that the Corps must (or will choose to) operate its projects so as to permit all additional flows in the Flint River and lower Chattahoochee River resulting from a decree establishing a consumption cap to flow through to Florida without any substantial delay, thereby permitting the entire marginal increase in streamflow to benefit Florida during drought operations or low-flow conditions. Rather, the evidence suggests that the Corps may operate its projects in the Basin to offset any increased flows into Lake Seminole during drought operations or when there are low flows by releasing less water from Corps reservoirs. As the Corps stated in its post-trial *amicus* brief, "[t]he Corps expects in an extreme low flow scenario [*i.e.*, during drought operations] that Apalachicola River flows would be very similar with or without a consumption cap until enough water is stored to return the system to normal operations." (United States Post-Trial Brief, at 17-18 (Dec. 15, 2016) (Dkt. No. 631)). This conclusion is supported by the evidence presented at trial.

i. The Possibility of Offset Operations by the Corps

The first question to be resolved is whether increased streamflow in the Flint River would *per force* manifest itself as increased streamflow in Florida. Stated another way, it is necessary to determine whether it is physically possible for the Corps to reduce releases from storage reservoirs along the Chattahoochee River if Flint River streamflow were to increase as a result of reduced agricultural irrigation in Georgia, thereby offsetting any potential benefit to Florida through the operation of its reservoirs. If it is not possible for the Corps to offset increased streamflow in the Flint River, Florida would be assured timely relief during drought or low-flow periods. The evidence indicates, however, that increased streamflow in the Flint River will not necessarily translate into increased streamflow in Florida during these periods.

Florida relies primarily on the testimony of Dr. Shanahan, one of its expert hydrologists, to show that it will inevitably receive a benefit from increased streamflow in the Basin during drought and low-flow periods despite the Corps' operation of federal reservoirs along the Chattahoochee River. Dr. Shanahan testified that it is "physically impossible to offset or trade significant quantities of water conserved during the summer of dry years in the Flint River or lower Chattahoochee River for additional water to be stored in distant Lake Lanier" because Lake Lanier receives water from only seven percent of the land area in Georgia's portion of the Basin. (Shanahan Direct, at ¶ 37;

see id. ¶¶ 20, 46-50). Further, Dr. Shanahan also testified that there is little to no reason for the Corps to hold water at the other two reservoirs with storage capacity – West Point Lake and Walter F. George Lake – because they receive much more inflow than Lake Lanier but do not face the same water demands as Lake Lanier, which is the source of Atlanta's water supply. According to Dr. Shanahan, because local inflow into these reservoirs exceeds storage capacity, these two lakes are largely operated in pass-through mode during the summer and fall. (Shanahan Direct, at ¶ 37; *see id.* ¶¶ 21, 43-45; Tr. vol. X, at 2527-28 (Shanahan)). Per Dr. Shanahan, then, the Corps must allow all or most of any additional streamflow from unregulated portions of the Basin to flow downstream into Florida.

While this analysis has some appeal, other evidence casts doubt on Dr. Shanahan's reasoning. First, Dr. Shanahan's own analysis shows that Lake Lanier, by itself, can offset an average of 341 cfs of streamflow in dry years. Thus, Lake Lanier alone could offset over three-quarters of the potential increase in streamflow of 438 cfs contemplated by one of the primary conservation scenarios advanced by Florida. (Bedient Direct, at ¶ 158; *see* Shanahan Direct, at ¶ 49). Second, historical storage data shows that West Point Lake has, during dry years, failed to recover to full reservoir storage, suggesting that inflows are not exceeding the capacity of the reservoir such that all project purposes can be fully satisfied and West Point Lake operated in pass-through mode. (Bedient Direct, at ¶¶ 153-54, 157).

Third, the Corps operates Walter F. George Lake and West Point Lake so as to protect storage levels in Lake Lanier, given that Lake Lanier is more difficult to refill. (JX113, at 3; Bedient Direct, at ¶ 156). The Corps has specified that, under dry conditions when Basin inflows are reduced, project operations are adjusted to conserve storage in West Point Lake and Walter F. George Lake while continuing to meet project purposes in accordance with the relevant action zones. (JX124, at 2-34, 2-39). Fourth, and finally, historical inflow and outflow data suggests that, during drought operations, the Corps releases less water from Walter F. George Lake (representing the combined release from all of the reservoirs on the Chattahoochee River) when local inflow at Lake Seminole increases. This confirms that, at least to some degree, the Corps may offset increased inflow from the Flint River by decreasing releases from its reservoirs along the Chattahoochee River. (Bedient Direct, at ¶¶ 149-50). Accordingly, Dr. Shanahan's analysis of Basin reservoir operations does not reach the level of "clear and convincing" evidence that additional water from the Flint River must flow downstream to Florida without any offset by the Corps.

In a further effort to prove that any additional streamflow from unregulated portions of the Basin must make its way to Florida in a timely manner, Florida also presented the testimony of Dr. Shanahan regarding statistical correlations between increased flows in the Flint River, on the one hand, and releases from Corps reservoirs on the other. According to Dr. Shanahan, if the Corps could trade "extra" water in the

Flint River for reduced releases from storage reservoirs along the Chattahoochee River, there would be a strong correlation between higher Flint River flows and reduced releases from the Corps' storage reservoirs. He found no such correlation. (Shanahan Direct, at ¶¶ 38-39). Dr. Shanahan also testified that, since Lake Seminole cannot store appreciable amounts of water, increased inflows into Lake Seminole should be closely correlated with higher releases from Jim Woodruff Dam. Dr. Shanahan discovered just such a correlation. (*Id.* at ¶ 40). Again, Dr. Shanahan's point is that increased flows in the Flint River will necessarily make its way into Florida without appreciable delay.

However, Dr. Shanahan's statistical analysis does not carry the day. Dr. Shanahan's own analysis shows that Basin inflow and local inflow into Lake Seminole can vary by thousands of cfs without affecting observed flows in the Apalachicola River. (Bedient Direct, at ¶¶ 145-47; GX866, at 109-12). Moreover, Dr. Shanahan's correlation analysis is likely flawed. First, he takes into account both wet and dry seasons. Including high flows will generally show good correlation between inflow and outflow, but the relevant question is how well inflows and outflows correlate during dry periods. Second, he takes into account over twenty-eight years of historical flow data from a period when the RIOP was not in place. It is meaningless to evaluate correlation between outflow and inflow under a significantly different operating regime. (*Id.* at ¶ 148). Accordingly, this testimony is not sufficient to show by clear and convincing evidence that increased streamflow on the

Flint River will inevitably provide timely relief to Florida.

ii. The Likelihood of Offset Operations by the Corps

The conclusion that the Corps can offset local inflow into Lake Seminole by managing releases from its storage reservoirs does not end the inquiry. Even if the Corps can offset increased streamflow in the Flint River by reducing releases from Corps reservoirs along the Chattahoochee River during drought operations or low-flow periods, it is of course possible that the Corps might not engage in such an offset. It is therefore necessary to determine whether the Corps could choose not to offset increased inflow into Lake Seminole, and, if so, whether it would in fact exercise its discretion in favor of releasing more water from Jim Woodruff Dam. While the evidence presented at trial shows that the Corps retains discretion in its operations, how the Corps will exercise that discretion remains unknown.

The evidence supports Florida's contention that the Corps retains the discretion to release more than the required 5,000 cfs minimum set out in the RIOP. As Dr. Shanahan rightly observes, the flow rates in the RIOP are minimum flow rates, rather than specific outflow rates. (Shanahan Direct, at ¶ 33). The Corps and the USFWS both describe these flow rates as "minimum, not target, releases for Jim Woodruff Lock and Dam." (JX124, at 2-72; *see* JX72, at 10). Accordingly,

the Corps may release more than the minimum releases in the table in order to meet various project purposes, like hydropower or flood control, or to maintain the fall rate. (JX72, at 10; JX124, at 2-72 – 2-73, 6-35; Tr. vol. X, at 2485-86, 2530-31 (Shanahan)). Georgia disagrees, characterizing the 5,000 cfs minimum release set out in the RIOP as a "target." For instance, Georgia experts Dr. Bedient and Dr. Zeng testified that the minimum flow specifications were used by the Corps as targets for its releases. (Zeng Direct, at ¶¶ 90-92; *see* Bedient Direct, ¶¶ 26-27). Georgia's experts erred on this point, as their characterization is directly contrary to the Corps' own statements. (JX124, at 2-72 – 2-73). Dr. Zeng admitted at trial that he was unaware of the Corps' statement that the 5,000 cfs minimum flow requirement was not a target. (Tr. vol. XIII, at 3363-66 (Zeng)). Though Florida is right on this point, it does not advance Florida's argument very far. It proves only that the Corps *can* release more than the minimum required releases under the RIOP – not that the Corps *will* make such releases.

In an effort to prove this point, Florida relies on Dr. Shanahan's testimony that the Corps in fact released more than the required minimum amount of water from Lake Seminole into the Apalachicola River during drought operations in 2012 and 2013. (Shanahan Direct, at ¶¶ 57-60). Georgia counters that flows above 5,000 cfs during drought operations can be explained by RIOP requirements such as the maximum fall rate, which requires the Corps to reduce releases from Jim Woodruff Dam at a specified rate – thereby causing the

Corps to release more than 5,000 cfs for a period of time under certain circumstances. (Bedient Direct, at ¶ 28; Zeng Direct, at ¶¶ 97-108). It is likely that RIOP's requirements account for at least part of the "excess" flows below Jim Woodruff Dam, as Dr. Shanahan admitted at trial. (Tr. vol. X, at 2497 (Shanahan)).[37] Nevertheless, Florida is likely correct that the Corps has historically exercised its discretion to release more than the required minimum under the RIOP. As Dr. Shanahan's analysis shows, the Corps released more than 5,000 cfs throughout 2012, even though the RIOP-specified minimum was consistently 5,000 cfs, by a margin that likely cannot be entirely explained by various RIOP requirements and exceptions. (Shanahan Direct, at ¶¶ 57-59; FX811, at 2-4, 20, 24). Indeed, Georgia's expert Dr. Bedient conceded at trial that the Corps has released more than the required RIOP minimum in the past, and even opined in his expert report that this would be within the Corps' discretion. (Tr. vol. XV, at 3934-48 (Bedient); GX866, at 107).[38] This too,

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[37] Dr. Shanahan also admitted that other factors, such as the inherent difficulty in making precise releases from a dam, may explain some marginal increment of the excess releases. The Corps typically releases approximately 5,050 cfs as a margin of safety in order to avoid unintentionally releasing less than 5,000 cfs. (Tr. vol. X, at 2493-94 (Shanahan)). However, the magnitude of the excess flows suggests that the Corps' releases are not entirely explained by an effort to maintain some margin of safety. (*Id.*; Shanahan Direct, at ¶ 59).

[38] It should be noted that the parties dispute the proper measure of releases at Jim Woodruff Dam. Georgia, for its part, insists that the Corps' daily recorded releases are the proper measure. This data arguably better reflects the Corps' intended flow releases because it is derived from provisional (or real-time)

however, fails to satisfy Florida's burden of proof. Dr. Shanahan's testimony proves only that the Corps may have exercised its discretion to release more than it was required to release *in the past*; it has not proven that the Corps will release more than the minimum *in the future*.

Florida does not rely solely on Dr. Shanahan's testimony to meet this final step in the analysis – namely, whether the Corps will exercise its discretion to release more water than required under the RIOP – but instead presents hydrologic modeling to prove that reductions in Georgia's water use would result in increased flows on the Apalachicola River even during drought operations or low-flow periods. Dr. Hornberger, another hydrologist providing expert testimony on behalf of Florida, developed a hydrologic model, the "Lake Seminole model," to determine whether a consumption cap would benefit Florida during summer months in

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flow estimates from the United States Geological Survey (the "USGS") relied upon by the Corps in the conduct of its operations. (Bedient Direct, at ¶ 161; Zeng Direct, at ¶ 92; Tr. vol. XV, at 3950-51 (Bedient)). However, provisional flow data may be inaccurate and is subject to change. (Tr. vol. XV, at 3954-55 (Bedient)). Florida maintains that the USGS' official flow records should be utilized as the proper comparator. The USGS official flow data is adjusted after-the-fact, often being revised upward from the provisional data to reflect final discharge amounts, given the imprecision of dam releases. (Bedient Direct, at ¶ 161; Zeng Direct, at ¶ 93; Tr. vol. X, at 2493 (Shanahan)). This data is arguably most accurate and complete. (Tr. vol. X, at 2535-37 (Shanahan)). It is unnecessary to resolve this dispute because, even using Florida's preferred measure, the fact remains that any release in excess of the mandatory minimum is inherently discretionary and therefore uncertain.

dry years. (Hornberger Direct, at ¶¶ 121-22). Dr. Hornberger used this model to determine how much water the Corps would release from Jim Woodruff Dam, using the discretion left to it under the RIOP, in the event of increased local inflow into Lake Seminole. Based on his modeling, Dr. Hornberger concludes that "the Lake Seminole model confirms that virtually all of the water that Georgia conserves by implementing a remedy will become flow in the Apalachicola River in the summer it is conserved." (*Id.* at ¶ 123).

I am less certain. The critical shortcoming of the Lake Seminole model is that it does not model the operations of all of the Corps reservoirs, but instead simply models Lake Seminole as a single run-of-river project. At trial, Dr. Hornberger conceded that his Lake Seminole model does not perform calculations for all five Corps reservoirs. (Tr. vol. VIII, at 1944-45 (Hornberger)). Because it does not model the Corps' operation of its reservoirs in the Basin as an integrated whole, it does not allow for the possibility that increases in flows from the Flint River will be offset by increases in storage on the Chattahoochee River. That is, it essentially forces all additional water through to Florida. (Bedient Direct, at ¶¶ 184-88; *see* Tr. vol. VIII, at 1950 (Hornberger); GX866, at 96). The Lake Seminole model also fails to fully incorporate the RIOP, in that it does not use Basin inflow as an input for release decisions and generates release decisions that violate required minimum releases. Because the RIOP is not incorporated into the Lake Seminole model, it actually predicts outflows from Jim Woodruff Dam for

certain periods that would be less than the minimum required by the RIOP. (Bedient Direct, at ¶¶ 194-95; Tr. vol. VIII, at 1965-70 (Hornberger)). As a result, the Lake Seminole model does not "fit" historical flow data – rendering its predictive results less than clear and convincing. (Bedient Direct, at ¶ 196). Given the programmatic shortcomings and predictive anomalies with the Lake Seminole model, I conclude that it does not provide sufficient certainty that the Corps will make greater releases at Jim Woodruff Dam than is required in an effort to benefit Florida's ecology.

My conclusion that Florida has not proven by clear and convincing evidence that the Corps will exercise its discretion to make greater releases from Jim Woodruff Dam than required is confirmed by other evidence presented at trial. Notably, the DEIS states that it is the Corps' intent to manage its reservoirs so as "to maintain a steady pool at as high a level as possible, consistent with other authorized purposes, particularly during [May-September]." (JX124, at 2-74 – 2-75). Additionally, testimony presented at trial by Georgia supports the conclusion that increased streamflow in the Flint River from reduced agricultural water may not reach Florida during drought operations or low-flow conditions. Dr. Bedient, Georgia's expert in hydrology and reservoir operations, testified that an increase in Basin inflows resulting from greater Flint River streamflow may simply result in the Corps releasing less from reservoirs along the Chattahoochee River upstream of Lake Seminole as the Corps operates its reservoirs as a single, integrated system. (Bedient Direct,

at ¶¶ 45-47). Georgia's chief hydrologist, Dr. Zeng, also testified that, under the Corps' rules, the "Corps can put every drop of water above 5,000 into storage to recover storage" during drought operations or low-flow periods. (Tr. vol. VIII, at 3340 (Zeng)). While Georgia may be too certain that the Corps will offset increased flows from the Flint River by reducing releases along the Chattahoochee River, the testimony of Dr. Bedient and Dr. Zeng does tend to show that the Corps may well choose not to exercise its discretion in Florida's favor. This is further confirmed by the Corps' operations during 2012 and 2013. Despite drought conditions during that period, the composite reservoir storage in 2013 was higher than it was in 2012 – illustrating the Corps' policy of seeking to balance various project purposes while replenishing storage. (Bedient Direct, at ¶¶ 30-31). Additionally, during drought operations in 2012, Flint River flow varied by up to 2,000 cfs without corresponding spikes in releases by the Corps from Jim Woodruff Dam. (*Id.* at ¶¶ 43-44). In other words, when Flint River flows increased, less water was released by the Corps from its storage reservoirs upstream of Lake Seminole. (Tr. vol. XIII, at 3342-43 (Zeng)). This evidence illustrates the uncertainty regarding the Corps' likely course of action during low-flow periods.

One other piece of evidence bears mentioning here, if only to explain why I do not rely on it. Georgia presented its own modeling in an effort to confirm that reductions in consumptive use leading to increased streamflow in the Flint River may not necessarily

materially increase state-line flows into Florida during dry periods. Dr. Bedient used the Corps' official "Reservoir Simulation" model for the Basin (referred to as "ResSim") to analyze the impact of consumption caps on flows in the Apalachicola River. (Bedient Direct, at ¶¶ 60-61, 73-78). However, ResSim is not an appropriate model for predicting whether or not the Corps will choose to release more than the minimum release prescribed by the RIOP during low-flow periods (*i.e.*, more than 5,000 cfs). The ResSim user manual notes that ResSim is a "very restrictive" model in that it requires the user to specify a "single value" for releases that is "effectively both a minimum and a maximum limit at the same time." (JX46, at 11-15, 11-17; *see* Shanahan Direct, at ¶ 65). As Dr. Bedient conceded, this means that the ResSim model does not recognize that the 5,000 cfs release specified in the RIOP is not a maximum release value. (Tr. vol. XV, at 3962-64 (Bedient); GX866, at 107-08; *see* Shanahan Direct, at ¶ 65). As a result, ResSim cannot accurately predict exercises of the Corps' discretion under low-flow conditions. For instance, Dr. Bedient's ResSim model under-predicted flows in 2011 – a year of low flows – by nearly 63,000 cfs because it allowed only for a 5,050 cfs flow (the additional 50 cfs being programmed into ResSim to account for the Corps' "safety margin" release that is designed to avoid violating the 5,000 cfs minimum) and could not reflect the instances in which the Corps actually released substantially more than 5,000 cfs. (Tr. vol. XV, at 3965-67 (Bedient)). As Dr. Shanahan concisely explained, "ResSim is programmed to only discharge the RIOP minimums. There is no possibility of having any other finding." (Tr. vol. X, at 2542; *see id.*

at 2518-19 (Shanahan)). While I do not credit Dr. Bedient's modeling efforts for these reasons,[39] that conclusion does not alter my overall finding that Florida has not carried its burden of pro[illegible] as to the effectiveness of a consumption cap as a remedy in this case.

iii. Summary

The evidence presented at trial suggests that the Corps' reservoir operations are a significant, and perhaps the primary, factor influencing the amount of streamflow crossing the state line during times of drought and low flows. The Corps has the ability to store streamflow above 5,000 cfs during dry periods. Unless the Corps' rules are changed, therefore, increased inflow into the reservoir system will not necessarily pass downstream to Florida during these times. Further, while the Corps may choose to release more than the minimum releases specified in the RIOP, there is no way to predict how the Corps will exercise its discretion in the event of increased local inflows into Lake Seminole. It may release additional water from Jim Woodruff Dam, or it may store additional water in its upstream reservoirs. Florida has not proven by clear and convincing evidence that any decree entered in this case will provide relief at the most critical dry periods. Rather, it appears likely that ensuring relief for Florida during these times would require modification of the rules governing the Corps'

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[39] I do find, however, that the ResSim modeling conducted by Georgia is useful for other purposes. *See infra*, Part VI.C.2.b.

reservoir operations and, hence, active participation by the Corps in this proceeding.

b. Uncertainty Regarding the Availability of an Effective Remedy During Periods Not Involving Drought Operations or Low-Flow Conditions

Even though I find that Florida has not proven by clear and convincing evidence that an effective remedy is available during the Corps' drought operations or low-flow periods without a decree binding the Corps, I still must consider whether a consumption cap would provide an effective remedy by assuring Florida increased flows during other periods. Florida notes that a reduction in Georgia's consumptive water use may result in benefits to Florida during non-drought conditions. The United States similarly takes the position that substantial increases in Basin inflow might provide certain benefits to Florida when it is not in drought operations. For instance, the Corps has represented that it may be able to: (1) delay the onset of drought operations by keeping the reservoirs in Zones 1 through 3 for a longer period; (2) extend the amount of time that it can meet the 5,000 cfs minimum flow requirement during drought operations; and (3) pass additional water through Jim Woodruff Dam, providing an immediate increase in flows to Florida, when Basin inflow is between 5,000 and 10,000 cfs. (United States Post-Trial Brief, at 15 (Dec. 15, 2016) (Dkt. No. 631)). However, the potential benefits to Florida of

increased flows in the Flint River during higher flow conditions when the Corps is not in drought operations are uncertain, rendering the efficacy of any relief speculative. Florida has not met its requirement to show by clear and convincing evidence that its injury can be redressed by increased flows during non-drought conditions.

As an initial matter, at trial Florida complained primarily of harm from low flows in drought years. Florida's witnesses did not present evidence that Florida has been harmed by Georgia's water use in "wet" or "average" years, much less that a consumption cap in those years would redress any harm to Florida. Nor did Florida's witnesses present evidence of harm from reduced average annual flows.[40] Instead, Florida's trial presentation focused on the harm from increased periods of low flow. Dr. Hornberger, for instance, testified extensively regarding the increase in the magnitude, frequency, and duration of low flows in the River, and quantified the frequency of low-flow days (*i.e.*, flows between 5,000 to 6,000 cfs) as a result of drought. (Hornberger Direct, at ¶¶ 42-44, 47-48, 51-54, 59-62). Dr. Kimbro, Florida's expert who examined the cause of the collapse of the oyster population in the Bay, relied

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[40] In the Order denying Georgia's motion to dismiss, I noted – accepting Florida's factual allegations as true and taking all reasonable inferences in favor of Florida – that Florida's Complaint focused not on "harm from inadequate *minimum* flows, but rather on harm arising from inadequate *average* annual flows." (Order on State of Georgia's Motion to Dismiss, at 12 (Dkt. No. 128)). However, as described below, Florida's evidence at trial focused on harm from low flows rather than average annual flows.

on Dr. Hornberger's testimony regarding increasing frequency of minimum river flows in explaining the injury to Florida's oyster fisheries. (Kimbro Direct, at ¶ 37). Dr. Greenblatt,[41] Florida's expert who provided testimony regarding the effect of a consumption cap on salinity levels in Apalachicola Bay, also relied on Dr. Hornberger's analysis regarding frequency of low flows in her testimony regarding the effect of streamflow on salinity in the Bay. (Greenblatt Direct, at ¶ 14). Further, Dr. Greenblatt's analysis focused on the effect of a reduction in Georgia's water use on salinity in the Bay *during low-flow months*. (Tr. vol. VII, at 1768-71 (Greenblatt)). Tellingly, even during typically low-flow summer months, Dr. Greenblatt calculated that there would be virtually no improvement in salinity conditions in the Bay in wet years (such as 2009). (*Id.* at 1771 (Greenblatt)).[42] As such, Florida in its trial presentation did not meaningfully advance any claim of harm from non-drought years or reduced average annual flows that it may have initially asserted, and instead focused on harm from recurring or sustained low-flow periods. Therefore, any marginal increase in

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[41] Dr. Greenblatt is a water resources engineer with expertise in modeling hydrodynamic flows. Dr. Greenblatt has a Ph.D. in water resources engineering from the University of California, Berkeley. (Greenblatt Direct, at ¶¶ 7-8).

[42] It is also notable that, while I find Florida's claim of harm to the ecosystem of the River is less compelling than its claim of harm to the Bay's ecosystem, Florida's expert testifying to harm in the River also relied on Dr. Hornberger's calculations regarding the number of days with flows below 6,000 cfs and explained the harm to the River's ecosystem in terms of days of low flows below 6,000 cfs rather than in terms of reduced average annual flows. (Allan Direct, at ¶¶ 32, 44, 51; *see* Hornberger Direct, at ¶ 46).

streamflow during the Corps' normal operations does not assist Florida in proving that a decree in this case would provide effective redress.

Even if there were evidence of harm from other than low-flow conditions, Florida did not provide substantial evidence of the benefits (if any) from increased overall flows. Given Florida's focus on harm from low-flow periods, it is unsurprising that Florida's trial presentation did not address the benefits of increased flows during "normal" periods. Florida did not quantify at trial the benefits from shortened drought operations or increased flows during non-drought operations. Indeed, Florida presented no evidence assessing the impact of a consumption cap on shortening the Corps' drought operations or on increased pass-through flows during non-drought conditions. It is possible that such benefits are slim. Pass-through of Basin inflow between 5,000 and 10,000 cfs would occur only when the Corps has not entered drought operations, as the Corps has discretion to store up to one hundred percent of Basin inflow during drought operations. This would have the effect of eliminating pass-through benefits for significant periods where Basin inflow is between 5,000 and 10,000 cfs. (JX124, at 2-71; *see* Bedient Direct, at ¶ 48).

To the extent that the record contains evidence regarding the effect of increased flows on shortened drought operations or increased flows during non-drought operations, that evidence was presented by Georgia and tends to show an absence of any significant benefit to Florida. According to Georgia's expert, Dr. Bedient, there would have been no additional days

of pass-through operations under the Corps' rules during the summer or fall months of 2012 had a consumption cap been imposed. (*See* Bedient Direct, at ¶¶ 55-57). Similarly, Dr. Bedient's ResSim modeling shows that there would be only minimal increased flows into Florida as a result of pass-through operations or shortened drought operations. ResSim, used by the Corps to model regulated watersheds, simulates Basin-wide reservoir operations based on the Corps' operating rules and hydrologic conditions. (*Id.* at ¶¶ 62-63; Zeng Direct, at ¶¶ 115-16). Using the ResSim model, it is possible to change the amount of upstream consumptive use and determine how these changes would impact reservoir levels and streamflow under the Corps' operating rules. (Bedient Direct, at ¶¶ 63-65). Dr. Bedient performed a modeling analysis by developing a "baseline" scenario for ResSim reflecting Georgia's total consumptive use (as calculated by Georgia) in the Basin in 2011 and then comparing various consumption cap scenarios against that baseline in order to isolate the effect of Georgia's consumptive use on state-line flows. (*Id.* at ¶¶ 73-75). In essence, Dr. Bedient used ResSim to project how long the Corps' reservoirs would be in each action zone and how long the Corps could avoid drought operations given different Basin inflows. Based on his modeling, Dr. Bedient concluded that a reduction in Georgia's consumptive use (as calculated by Georgia) by thirty percent, or even to 1992 levels, would lead to virtually no change in state-line flows. Dr. Bedient also found that an increase of streamflow in the Basin of 1,000 cfs, as Florida suggests is possible, would result in only minimal increases in state-line flows in critical summer

months. (*Id.* at ¶¶ 60-62, 78-87; Tr. vol. XV, at 4002-05 (Bedient); GX866, at 69).[43]

Florida criticizes Georgia's use of the ResSim model. Florida argues that ResSim should not be used as a predictive model because it cannot accurately capture the Corps' discretion and because it utilizes Georgia's consumptive use data, which may underestimate Georgia's water use. (Shanahan Direct, at ¶¶ 54-56; Tr. vol. XV, at 3967-73 (Bedient)). However, the shortcomings identified by Florida are not relevant when ResSim is used for comparative purposes (as Dr. Bedient used it) because any errors are canceled out. The ResSim model is therefore a valid tool for evaluating the impact of increased streamflow from the imposition of a consumption cap as compared to a historical record. Accordingly, it is useful when used to compare how long the Corps would be functioning under normal operating procedures versus drought procedures under different flow conditions. (*See* Bedient Direct, at ¶¶ 73-77; Tr. vol. XV, at 3969, 3972-75, 4000 (Bedient)).

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[43] Florida's hydrology expert, Dr. Hornberger, reached similar results when he conducted modeling using ResSim. Using ResSim, Dr. Hornberger found that a fifty percent reduction in Georgia's agricultural use would not lead to any increased streamflow into Florida for many of the dry months during dry years such as those experienced in 2011 and 2012. (Tr. vol. VIII, at 1933-35 (Hornberger); Bedient Direct, at ¶¶ 177-80; GX866, at 95). Given the modeling results of Dr. Hornberger, as well as the results reached by Dr. Bedient when he modeled Florida's proposed increase in streamflow of 1,000 cfs, I have no basis to conclude that a consumption cap will afford Florida effective relief even if I accept Florida's estimates of the increased streamflow that would result from a consumption cap.

ResSim is reliable when used for these purposes. According to the Corps, ResSim is "the standard for [Corps] reservoir operations modeling," and is the "tool most capable of faithfully representing" reservoir operations. (JX124, at 4-3; *see id.* at ES-14 n.2; Bedient Direct, at ¶¶ 65-66). Dr. Bedient performed a "goodness-of-fit" analysis, the standard method for evaluating the ability of a model to predict data, by simulating ResSim releases and comparing those modeled outflows with observed flows from 2008 through 2011. The results of this analysis indicated that ResSim is an accurate model.[44] (Bedient Direct, at ¶¶ 67-71; Tr. vol. XV, at 4000 (Bedient)). Accordingly, I find that ResSim is a reliable and useful model when used to determine whether Florida would receive increased state-line flows as a result of the Corps' ability to operate normally for longer periods of time.

In sum, Florida has provided no evidence that a decree in this case could provide an effective remedy during normal (*i.e.*, non-drought) periods. Further, the evidence presented by Georgia tends to show that, even to the extent that Florida may receive additional state-line flows as a result of increases in Basin inflow from a cap on Georgia's consumptive water use, the benefits to Florida are likely rare and unpredictable. (*See* Bedient Direct, at ¶ 58). Florida's lack of proof,

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[44] Further, a "goodness-of-fit" analysis conducted by Florida's own expert, Dr. Hornberger, revealed that ResSim had a better "fit" to the data than his own Lake Seminole model for many years – including some dry years. (Tr. vol. VIII, at 1950-60 (Hornberger)).

combined with the credible testimony offered by Georgia, leads me to conclude that Florida has not carried its burden to show that it can obtain meaningful redress without a decree that binds the Corps, even when one considers the possibility of increased pass-through during non-drought conditions or shortened drought operations.

VII. CONCLUSION

In issuing the Order on Georgia's motion to dismiss, I observed that "Florida's claim will live or die based on whether Florida can show that a consumption cap is justified and will afford adequate relief." (Order on Georgia's Motion to Dismiss, at 13 (Dkt. No. 128) (citing *Idaho*, 444 U.S. at 392)). Florida has failed to show that a consumption cap will afford adequate relief. The testimony and evidence submitted at trial demonstrates that the Corps can likely offset increased streamflow in the Flint River by storing additional water in its reservoirs along the Chattahoochee River during dry periods. The evidence also shows that the Corps retains extensive discretion in the operation of those federal reservoirs. As a result, the Corps can release (or not release) water largely as it sees fit, subject to certain minimum requirements under the RIOP. There is no guarantee that the Corps will exercise its discretion to release or hold back water at any particular time. Further, Florida has not shown that it would benefit from increased pass-through operations under normal conditions. Finally, without the Corps as a party, the Court cannot order the Corps to take any

particular action. Accordingly, Florida has not proven by clear and convincing evidence that any additional streamflow in the Flint River resulting from a decree imposing a consumptive cap on Georgia's water use would be released from Jim Woodruff Dam into the River at a time that would provide a material benefit to Florida.

VIII. RECOMMENDATION

Because Florida has not met its burden, I recommend that the Court deny Florida's request for relief. A proposed decree embodying my recommendation is attached as Appendix J.

Dated: February 14, 2017

Respectfully submitted,

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APPENDIX A

Florida v. Georgia No. 142, Original

The official docket sheet for this case, as maintained by the Clerk of the Supreme Court of the United States, is available online. The official docket sheet does not contain entries for papers filed directly with the Special Master. The Special Master has prepared the following docket sheet which includes all filings made with or by the Special Master, in ".pdf" format.

Ralph I. Lancaster, Jr., Special Master

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Docket No.	Date	Filings
1	2014-11-3	Complaint – Florida v. Georgia, No. 142, Original
2	**2014-11-19**	**Order Appointing Ralph Lancaster Special Master**
3	**2014-11-21**	**Notice of Initial Telephone Conference 12/1/14**
4	**2014-11-24**	**Oath of Special Master Ralph Lancaster**
5	**2014-12-3**	**Case Management Order No. 1**
6	**2014-12-3**	**Case Management Plan**
7	**2014-12-5**	**Transcript of Initial Telephone Conference of 12/1/14**

8	2014-12-10	Joint Request to Modify Case Management Plan (re 6)
9	**2014-12-11**	**Notice of Telephone Conference to be Held 12/15/14**
10	**2014-12-15**	**Transcript of Telephone Conference of 12/15/14**
11	2014-12-17	C. Primis Letter to Special Master (re 6,8)
12	**2014-12-19**	**Case Management Order No. 2** (re 6,8,11)
13	**2014-12-19**	**Special Master Letter to Counsel**
14	**2014-12-22**	**Corrected Special Master Letter to Counsel** (re 6,8,11)
15	2015-1-8	Answer to Complaint (re 1)
16	2015-1-12	Certificate of Service – GA First Request for Production to FL
17	2015-1-12	Certificate of Service – GA First Interrogatories to FL
18	2015-1-12	Certificate of Service – FL First Request for Production to GA
19	2015-1-12	Certificate of Service – FL First Interrogatories to GA
20	2015-1-22	Joint Letter from Counsel to Special Master
21	**2015-1-23**	**Special Master Letter to Counsel** (re 20)
22	2015-1-30	C. Primis Letter to Special Master

23	**2015-1-30**	**Case Management Order No. 3** (re 5,12,22)
24	2015-2-3	Certificate of Service – FL's Service of Non-Party Subpoenas
25	2015-2-3	Certificate of Service – FL's Responses to GA's First Request for Production
26	2015-2-3	Certificate of Service – GA's Service of Non-Party Subpoenas
27	2015-2-3	Certificate of Service – GA's Responses to FL's First Request for Production
28	**2015-2-4**	**Notice of Telephone Conference to be Held 2/10/15**
29	2015-2-5	M. Gray Letter to Special Master
30	**2015-2-5**	**J. Dunlap Letter to M. Gray** (re 29)
31	2015-2-5	C. Davis Letter to Special Master
32	**2015-2-6**	**J. Dunlap Letter to C. Davis** (re 31)
33	2015-2-6	GA Status Report
34	2015-2-6	FL Status Report
35	2015-2-9	US Statement of Participation
36	2015-2-9	J. Skipper Letter to Special Master

37	2015-2-9	K. Robbin Letter to Special Master
38	**2015-2-10**	**J. Dunlap Letter to J. Skipper** (re 36)
39	**2015-2-10**	**J. Dunlap Letter to K. Robbin** (re 37)
40	**2015-2-10**	**Case Management Order No. 4**
41	2015-2-11	Agreement Regarding Document Production and Electronic Discovery Procedures
42	2015-2-11	Certificate of Service – GA Objections to FL First Interrogatories
43	2015-2-11	Certificate of Service – GA First and Second Production to FL First Document Request
44	2015-2-11	Certificate of Service – FL Objections to GA First Interrogatories
45	2015-2-11	Certificate of Service – FL First Production to GA First Document Request
46	2015-2-12	Certificate of Service – GA's Service of Non-Party Subpoenas
47	**2015-2-16**	**Transcript of Telephone Conference 2/10/15**
48	2015-2-16	GA's Motion to Dismiss for Failure to Join a Required Party

49	2015-2-16	Exhibits A and B to GA's Motion to Dismiss for Failure to Join a Required Party (re 48)
50	2015-2-18	Certificate of Service – GA's Service of Non-Party Subpoenas
51	2015-2-20	M. Gray Letter to Special Master (re 48)
52	**2015-2-23**	**Case Management Order No. 5** (re 23,48,51)
53	2015-2-26	Certificate of Service – GA Response to FL Interrogatories
54	2015-2-26	Certificate of Service – FL Response to GA Interrogatories
55	2015-3-2	Certificates of Service – FL's Service of Non-Party Subpoenas
56	2015-3-2	Joint Proposed Protective Order
57	**2015-3-3**	**Case Management Order No. 6** (re 56)
58	2015-3-6	FL Status Report
59	2015-3-6	GA Status Report
60	2015-3-6	Certificate of Service – GA 2nd Request for Production to FL
61	2015-3-6	Certificate of Service – GA 2nd Interrogatories to FL
62	2015-3-6	Certificate of Service – GA 3rd Production to FL

63	2015-3-10	Certificate of Service – FL's Service of Non-Party Subpoenas
64	2015-3-10	Certificate of Service – GA's Service of Non-Party Subpoenas
65	2015-3-10	Certificate of Service – FL 2nd Production to GA
66	2015-3-11	United States' Amicus Curiae Brief in Opposition to GA's Motion to Dismiss (re 48)
67	2015-3-11	Certificate of Service – FL's Service of Non-Party Subpoenas
68	2015-3-12	Certificate of Service – FL 3rd Production to GA
69	2015-3-12	Joint Certificate of Service – GA and FL Touhy Requests and Subpoenas
70	2015-3-13	Certificate of Service – FL 2nd Set of Interrogatories and 2nd Request for Production to GA
71	2015-3-13	Certificate of Service – FL's Service of Non-Party Subpoenas
72	2015-3-13	Certificate of Service – FL's Service of Non-Party Subpoenas
73	2015-3-13	Certificate of Service – GA 3rd Request for Production to FL

74	**2015-3-16**	**Transcript of Telephone Conference 3/13/15**
75	2015-3-18	FL's Opposition to GA's Motion to Dismiss (re 48)
76	2015-3-19	M. Caplan Letter to Special Master
77	2015-3-23	M. Gray Letter to Special Master
78	2015-3-23	J. Dwoskin Letter to Special Master
79	**2015-3-24**	**J. Dunlap Correspondence to J. Dwoskin** (re 78)
80	2015-3-24	M. Gray Letter to Special Master
81	2015-3-24	C. Primis Letter to Special Master (re 52)
82	**2015-3-25**	**J. Dunlap Correspondence to C. Primis** (re 81)
83	2015-3-25	R. Mowrey Letter to Special Master
84	2015-3-25	A. Whalen Letter to Special Master
85	2015-3-26	K. Keene Letter to Special Master
86	2015-3-26	Certificate of Service – FL Response and Objections to GA 2nd Request for Production
87	2015-3-27	Certificate of Service – GA 4th Production to FL

88	2015-4-1	M. Hurley Letter to Special Master
89	2015-4-2	Certificate of Service – GA 5th Production to FL
90	2015-4-2	Certificate of Service – GA Response and Objections to FL 2nd Request for Production
91	2015-4-2	Joint Motion for Confidentiality
92	2015-4-2	Certificate of Service – FL Responses to GA Discovery
93	2015-4-3	Certificate of Service – FL 4th Production to GA
94	2015-4-3	FL Status Report
95	2015-4-3	Certificate of Service – GA 6th Production to FL
96	2015-4-3	GA Reply Memo re Motion to Dismiss (re 48)
97	2015-4-3	GA Status Report
98	2015-4-6	Certificate of Service – FL Objections to GA 2nd Set of Interrogatories
99	**2015-4-8**	**Case Management Order No. 7** (re 6)
100	**2015-4-10**	**Transcript of Telephone Conference 4/7/15**
101	**2015-4-13**	**Case Management Order No. 8** (re 91)
102	2015-4-13	Certificate of Service – GA Objections to FL 2nd Set of Interrogatories

103	**2015-4-17**	**J. Dunlap Email Notice to Counsel Scheduling Hearing** (re 48)
104	2015-4-20	Certificate of Service – FL Responses to GA 2nd Set of Interrogatories
105	2015-4-22	M. Gray Letter to Special Master (re 35,103)
106	**2015-4-23**	**Case Management Order No. 9** (re 35,105)
107	2015-4-27	Certificate of Service – GA Responses to FL 2nd Set of Interrogatories
108	2015-4-30	C. Primis Letter to Special Master (re 12,99)
109	2015-4-30	Certificate of Service – GA Third-Party Productions to FL
110	2015-4-30	Certificate of Service – GA 7th Production to FL
111	2015-5-1	Certificate of Service – FL 2nd Supplement to GA First Set of Interrogatories
112	2015-5-1	FL's Brief re Joinder of Alabama (re 48)
113	2015-5-1	GA Status Report
114	2015-5-1	Certificate of Service – GA 8th Production to FL
115	2015-5-1	GA's Supplemental Brief re Motion to Dismiss (re 48)
116	2015-5-1	FL Status Report

117	2015-5-1	Alabama's Amicus Curiae Brief re Non-Joinder of Alabama (re 48)
118	**2015-5-4**	**J. Dunlap Email Notice to Counsel re Status Conference**
119	**2015-5-11**	**Case Management Order No. 10** (re 6,108)
120	2015-5-29	Certificate of Service – GA Third-Party Productions to FL
121	2015-5-29	Certificate of Service – GA 9th Production to FL
122	2015-5-29	Certificate of Service – GA First Supplemental Responses to FL 1st Interrogatories
123	2015-5-29	Certificate of Service – GA First Supplemental Responses to FL 2nd Interrogatories
124	2015-6-4	Certificate of Service – GA 10th Production to FL
125	**2015-6-8**	**Transcript of Hearing 6/2/15** (re 48)
126	2015-6-15	Certificate of Service – GA 11th Production to FL
127	**2015-6-16**	**Transcript of Telephone Conference 6/9/15**
128	**2015-6-19**	**Order re GA Motion to Dismiss** (re 48)
129	2015-6-22	Certificate of Service – GA 12th Production to FL

130	2015-6-29	J. Rousseaux Letter to Special Master
131	**2015-6-30**	**J. Dunlap Correspondence to J. Rousseaux**
132	2015-7-1	Certificate of Service – GA Third-Party Production to FL
133	**2015-7-1**	**J. Dunlap Email Notice to Counsel re Status Conference**
134	2015-7-6	M. Gray Letter to Special Master
135	2015-7-7	Certificate of Service – GA 13th Production to FL
136	2015-7-8	Certificate of Service – FL Touhy Request
137	**2015-7-9**	**J. Dunlap Correspondence to M. Gray** (re 134)
138	2015-7-9	M. Gray Correspondence to J. Dunlap (re 134,137)
139	2015-7-9	GA Status Report
140	2015-7-9	FL Status Report
141	2015-7-9	Certificate of Service – FL 7th Production to GA
142	**2015-7-13**	**J. Dunlap Email Notice to Counsel re Status Conference Schedule**
143	**2015-7-13**	**J. Dunlap Correspondence to M. Gray** (re 134)

144	2015-7-13	Certificate of Service – FL's Service of Non-Party Subpoenas
145	**2015-7-22**	**Transcript of Telephone Conference 7/13/15**
146	2015-7-27	Certificate of Service – GA Third-Party Production to FL
147	2015-8-5	Certificate of Service – GA 14th Production to FL
148	2015-8-5	Certificate of Service – GA 15th Production to FL
149	2015-8-7	GA Status Report
150	2015-8-7	FL Status Report
151	2015-8-7	Certificate of Service – FL 8th Production to GA
152	**2015-8-10**	**J. Dunlap Correspondence to Counsel**
153	2015-8-10	A. Winsor Correspondence to J. Dunlap (re 152)
154	2015-8-10	C. Primis Correspondence to J. Dunlap (re 152)
155	2015-8-26	Certificate of Service – FL's Notice of Deposition
156	2015-8-26	Certificate of Service – FL's Notice of Deposition
157	2015-8-26	Certificate of Service – FL's Notice of Deposition
158	2015-8-26	Certificate of Service – FL's Notice of Deposition

159	2015-8-26	Certificate of Service – GA 16th Production to FL
160	2015-8-28	Certificate of Service – FL's Notice of Deposition
161	2015-8-28	Certificate of Service – FL's Notice of Deposition
162	2015-8-28	Certificate of Service – FL's Notice of Deposition
163	2015-8-28	Certificate of Service – FL's Notice of Deposition
164	2015-8-28	Certificate of Service – FL's Notice of Deposition
165	2015-8-28	Certificate of Service – FL's Notice of Deposition
166	2015-9-2	Certificate of Service – FL Third-Party Production to GA
167	2015-9-4	FL Status Report
168	2015-9-4	GA Status Report
169	2015-9-4	Certificate of Service – FL 9th Production to GA
170	2015-9-9	Certificate of Service – GA 17th Production to FL
171	2015-9-10	Certificate of Service – FL's Notice of Deposition
172	2015-9-11	Certificate of Service – FL Third-Party Production to GA
173	**2015-9-11**	**Transcript of Telephone Conference 9/8/15**

174	2015-9-15	Certificate of Service – GA's Notice of Deposition
175	2015-9-15	Certificate of Service – GA's Notice of Deposition
176	2015-9-15	Certificate of Service – GA's Notice of Deposition
177	2015-9-15	Certificate of Service – GA's Notice of Deposition
178	2015-9-15	Certificate of Service – GA's Notice of Deposition
179	2015-9-15	Certificate of Service – GA's Notice of Deposition
180	2015-9-15	Certificate of Service – GA's Notice of Deposition
181	2015-9-15	Certificate of Service – GA's Notice of Deposition
182	2015-9-15	Certificate of Service – GA's Notice of Deposition
183	2015-9-15	Certificate of Service – GA's Notice of Deposition
184	2015-9-15	Certificate of Service – GA's Notice of Deposition
185	2015-9-15	Certificate of Service – GA's Notice of Deposition
186	2015-9-15	Certificate of Service – GA's Notice of Deposition
187	2015-9-16	Certificate of Service – FL 10th Production to GA
188	2015-9-18	Certificate of Service – FL's Notice of Deposition

189	2015-9-18	Certificate of Service – FL's Notice of Deposition
190	2015-9-18	Certificate of Service – FL's Notice of Deposition
191	2015-9-18	Certificate of Service – FL's Notice of Deposition
192	2015-9-18	Certificate of Service – FL's Notice of Deposition
193	2015-9-18	Certificate of Service – FL's Notice of Deposition
194	2015-9-18	Certificate of Service – FL's Notice of Deposition
195	2015-9-18	Certificate of Service – FL's Notice of Deposition
196	2015-9-21	Certificate of Service – FL's Notice of Deposition
197	2015-9-21	Certificate of Service – FL's Notice of Deposition
198	2015-9-21	Certificate of Service – FL's Notice of Deposition
199	2015-9-21	Certificate of Service – FL's Notice of Deposition
200	2015-9-22	Certificate of Service – GA Third-Party Production to FL
201	2015-9-23	C. Primis Correspondence to Special Master
202	2015-9-24	Certificate of Service – GA's Notice of Deposition
203	2015-9-24	Certificate of Service – GA's Notice of Deposition

204	2015-9-24	Certificate of Service – GA's Notice of Deposition
205	**2015-9-24**	**Notice of Telephone Conference on 9/29/15**
206	2015-9-25	Certificate of Service – FL First Requests for Admission to GA
207	2015-9-25	Certificate of Service – FL 3rd Set of Interrogatories to GA
208	2015-9-25	Certificate of Service – GA First Requests for Admission to FL
209	2015-9-25	Certificate of Service – GA 3rd Set of Interrogatories to FL
210	2015-9-28	C. Pendergrast Correspondence to Special Master
211	**2015-9-28**	**Special Master Correspondence to C. Pendergrast**
212	2015-9-28	Certificate of Service – GA Third-Party Production to FL
213	2015-9-29	Certificate of Service – FL 11th Production to GA
214	2015-10-1	C. Primis Letter to Special Master (re 201)
215	2015-10-1	P. Perry Letter to Special Master (re 201)
216	2015-10-1	Certificate of Service – FL 12th Production to GA
217	2015-10-1	Certificate of Service – GA 18th Production to FL
218	2015-10-2	GA Status Report

219	2015-10-2	FL Status Report
220	2015-10-2	Certificate of Service – FL 2nd Supplemental Responses to GA First Interrogatories
221	**2015-10-5**	**J. Dunlap Correspondence to Counsel**
222	**2015-10-5**	**Transcript of Telephone Conference 9/29/15** (re 201)
223	**2015-10-6**	**Case Management Order No. 11**
224	2015-10-7	Certificate of Service – GA's Notice of Deposition
225	2015-10-7	Certificate of Service – GA's Notice of Deposition
226	2015-10-7	Certificate of Service – GA's Notice of Deposition
227	2015-10-7	Certificate of Service – GA's Notice of Deposition
228	2015-10-7	Certificate of Service – GA's Notice of Deposition
229	2015-10-7	Certificate of Service – GA's Notice of Deposition
230	2015-10-7	Certificate of Service – GA's Notice of Deposition
231	2015-10-7	Certificate of Service – GA's Notice of Deposition
232	2015-10-7	Certificate of Service – GA's Notice of Deposition
233	2015-10-7	Certificate of Service – GA's Notice of Deposition

234	2015-10-7	Certificate of Service – GA's Notice of Deposition
235	2015-10-7	Certificate of Service – GA's Notice of Deposition
236	2015-10-7	Certificate of Service – GA's Notice of Deposition
237	2015-10-7	Certificate of Service – GA's Notice of Deposition
238	2015-10-7	Certificate of Service – GA's Notice of Deposition
239	2015-10-7	Certificate of Service – GA's Notice of Deposition
240	2015-10-7	Certificate of Service – GA's Notice of Deposition
241	2015-10-7	Certificate of Service – GA's Notice of Deposition
242	2015-10-8	Certificate of Service – FL's Notice of Deposition
243	2015-10-8	Certificate of Service – FL's Notice of Deposition
244	2015-10-8	Certificate of Service – FL's Notice of Deposition
245	2015-10-8	Certificate of Service – FL's Notice of Deposition
246	2015-10-8	Certificate of Service – FL's Notice of Deposition
247	2015-10-8	Certificate of Service – FL's Notice of Deposition
248	2015-10-9	Certificate of Service – FL's Revised Notice of Deposition

249	2015-10-9	Certificate of Service – FL's Revised Notice of Deposition
250	**2015-10-9**	**Transcript of Telephone Conference 10/6/15**
251	2015-10-12	P. Perry Correspondence to Special Master
252	2015-10-12	C. Primis Correspondence to Special Master (re 251)
253	**2015-10-12**	**Notice of Telephone Conference 10/16/15** (re 251)
254	2015-10-12	Certificate of Service – GA's Cross-Notice of Deposition
255	2015-10-12	Certificate of Service – GA's Cross-Notice of Deposition
256	2015-10-12	Certificate of Service – FL 13th Production to GA
257	2015-10-14	Certificate of Service – FL's Objections to Notice of Deposition
258	**2015-10-16**	**Case Management Order No. 12** (re 251)
259	2015-10-16	Certificate of Service – FL Third-Party Productions to GA
260	2015-10-16	Certificate of Service – FL 14th Production to GA
261	2015-10-21	Certificate of Service – GA's Notice of Deposition
262	2015-10-21	Certificate of Service – GA's Notice of Deposition
263	2015-10-21	Certificate of Service – GA's Notice of Deposition

264	2015-10-21	Certificate of Service – GA's Notice of Deposition
265	2015-10-21	Certificate of Service – GA's Notice of Deposition
266	2015-10-21	Certificate of Service – GA's Notice of Deposition
267	**2015-10-21**	**Transcript of Telephone Conference 10/16/15** (re 251)
268	2015-10-23	C. Primis Letter to Special Master
269	2015-10-23	Certificate of Service – FL 15th Production to GA
270	2015-10-23	Certificate of Service – FL's Notice of Deposition
271	2015-10-23	Certificate of Service – FL's Notice of Deposition
272	2015-10-23	Certificate of Service – FL's Notice of Deposition
273	**2015-10-26**	**J. Dunlap Correspondence to Counsel** (re 268)
274	2015-10-26	C. Primis Letter to Special Master (re 268)
275	2015-10-26	P. Perry Letter to Special Master (re 268)
276	2015-10-26	P. Perry Correspondence to J. Dunlap (re 273)
277	2015-10-26	C. Primis Correspondence to J. Dunlap (re 273)

278	2015-10-26	Certificate of Service – FL Objections to GA Request for Admissions
279	2015-10-26	Certificate of Service – FL Objections to GA 3rd Set of Interrogatories
280	2015-10-26	Certificate of Service – GA Objections to FL Request for Admissions
281	2015-10-26	Certificate of Service – GA Objections to FL 3rd Set of Interrogatories
282	2015-10-27	Certificate of Service – GA's Revised Notice of Deposition
283	**2015-10-28**	**Notice of Telephone Conference on 11/2/15** (re 268)
284	2015-10-30	M. Gray Correspondence to J. Dunlap (re 283)
285	**2015-11-2**	**J. Dunlap Correspondence to M. Gray** (re 284)
286	**2015-11-2**	**Case Management Order No. 13** (re 268,283)
287	2015-11-2	Certificate of Service – FL 16th Production to GA
288	2015-11-3	Certificate of Service – FL's Notice of Deposition
289	**2015-11-4**	**Transcript of Telephone Conference 11/2/15** (re 268,283)
290	2015-11-6	FL Status Report

291	2015-11-6	GA Status Report
292	2015-11-6	Certificate of Service – GA Third-Party Productions to FL
293	2015-11-9	Certificate of Service – GA Response to FL 3rd Interrogatories
294	2015-11-9	Certificate of Service – GA Response to FL Request for Admissions
295	2015-11-9	Certificate of Service – GA Notice of Deposition
296	2015-11-9	Certificate of Service, Revised and Amended – FL 17th Production to GA
297	2015-11-9	Certificate of Service – FL 18th Production to GA
298	2015-11-9	Certificate of Service – FL 1st Supplemental Response to GA 2nd Interrogatories
299	2015-11-9	Certificate of Service – FL 3rd Supplemental Response to GA First Interrogatories
300	2015-11-9	Certificate of Service – FL Response to GA 3rd Set of Interrogatories
301	2015-11-9	Certificate of Service – FL Response to GA Request for Admissions
302	2015-11-10	Certificate of Service – GA 2nd Supplemental Response to FL First Interrogatories

303	2015-11-10	Certificate of Service – GA 19th Production to FL
304	2015-11-10	Certificate of Service – FL Privilege Log
305	2015-11-10	Certificate of Service – FL Third-Party Production to GA
306	2015-11-10	Certificate of Service – FL 19th Production to FL
307	2015-11-10	Certificate of Service – FL 20th Production to GA
308	2015-11-10	Certificate of Service – GA 20th Production to FL
309	2015-11-10	Certificate of Service – FL 21st Production to GA
310	2015-11-11	Certificate of Service – FL Objection to Notice of Deposition
311	**2015-11-16**	**Transcript of Telephone Conference 11/10/15**
312	2015-11-18	Certificate of Service – FL's Notice of Deposition
313	2015-11-18	Certificate of Service – FL's Notice of Deposition
314	2015-11-23	Certificate of Service – GA Response and Objection to Subpoena
315	2015-11-24	Certificate of Service – GA Responses and Objections to Notice of Deposition
316	2015-11-24	Certificate of Service – GA Third-Party Production to FL

317	2015-11-28	Certificate of Service – GA Third-Party Production to FL
318	2015-12-1	Certificate of Service – FL Third-Party Production to GA
319	2015-12-1	Certificate of Service – FL's Revised Notice of Deposition
320	2015-12-4	FL Status Report
321	2015-12-4	GA Status Report
322	2015-12-4	Certificate of Service – FL Amended Notice of Deposition
323	2015-12-4	Certificate of Service – GA 22nd Production to FL and 3rd Supplemental Response to FL 1st Interrogatories
324	2015-12-7	Certificate of Service – GA 4th Supplemental Response to FL 1st Interrogatories
325	2015-12-7	Certificate of Service – GA 1st Supplemental Response to FL 3rd Interrogatories
326	**2015-12-8**	**J. Dunlap Email Notice to Counsel re Status Conference Schedule**
327	2015-12-9	Certificate of Service – GA Privilege Log to FL
328	**2015-12-10**	**Transcript of Telephone Conference 12/8/15**
329	2015-12-11	Certificate of Service – GA's Notice of Deposition

330	2015-12-14	Certificate of Service – GA 23rd Production to FL
331	2015-12-15	Certificate of Service – GA's Notice of Deposition
332	2015-12-18	Certificate of Service – FL's Notice of Deposition
333	2015-12-18	Certificate of Service – FL's Cross-Notice of Deposition
334	2015-12-22	Certificate of Service – GA Objection to FL Amended Notice of Deposition
335	2015-12-23	Certificate of Service – FL Third-Party Production to GA
336	2015-12-23	Certificate of Service – FL First Supplemental Production to GA
337	2015-12-23	Certificate of Service – GA 24th Production to FL
338	2015-12-30	Certificate of Service – FL Supplemental Response to Requests for Admission
339	2016-1-4	Certificate of Service – FL Third-Party Production to GA
340	2016-1-4	Certificate of Service – FL 2nd Supplemental Response to Requests for Admission
341	2016-1-6	Certificate of Service – FL's Notice of Deposition
342	2016-1-8	GA Status Report
343	2016-1-8	FL Status Report

344	2016-1-8	Certificate of Service – FL Third-Party Production to GA
345	2016-1-8	Certificate of Service – FL's Notice of Deposition
346	2016-1-8	Certificate of Service – FL's Notice of Deposition
347	2016-1-8	Certificate of Service – FL's Notice of Deposition
348	2016-1-11	Certificate of Service – FL Amended Cross-Notice of Deposition
349	2016-1-11	Certificate of Service – FL Notice of Deposition
350	2016-1-11	Certificate of Service – GA Revised Notice of Deposition
351	2016-1-13	FL's Brief re Deposition of Commissioner of Agriculture & Consumer Services
352	2016-1-13	Certificate of Service – FL's Notice of Deposition
353	**2016-1-14**	**Case Management Order No. 14**
354	**2016-1-15**	**Transcript of Status Conference 1/12/16**
355	2016-1-15	Certificate of Service – GA 5th Supplemental Response to FL 1st Interrogatories
356	2016-1-15	Certificate of Service – GA Categorical Privilege Log to FL

357	2016-1-15	Certificate of Service – GA 25th Production to FL
358	2016-1-18	GA's Response to FL's Brief re Deposition of Commissioner of Agriculture & Consumer Services (re 351)
359	2016-1-18	Certificate of Service – GA's Notice of Deposition
360	**2016-1-20**	**Case Management Order No. 15**
361	2016-1-22	Certificate of Service – GA Third-Party Production to FL
362	2016-1-23	Certificate of Service – FL's Amended Notice of Deposition
363	2016-1-25	Certificate of Service – FL 4th Supplemental Response to GA 1st Interrogatories
364	2016-1-25	Certificate of Service – FL 2nd Supplemental Response to GA 2nd Interrogatories
365	2016-1-25	Certificate of Service – FL 2nd Supplemental Response to GA 3rd Interrogatories
366	2016-1-25	Certificate of Service – FL 2nd Supplemental Production to GA
367	2016-1-25	Certificate of Service – FL Third-Party Productions to GA
368	2016-1-26	Certificate of Service – FL's Notice of Deposition

369	2016-2-1	Certificate of Service – GA 6th Supplemental Responses to FL 1st Interrogatories and GA 26th Production of Documents to FL
370	2016-2-2	Certificate of Service – GA Response and Objection to FL Subpoena
371	2016-2-4	Certificate of Service – FL 3rd Supplemental Production to GA
372	2016-2-5	FL Status Report
373	2016-2-5	GA Status Report
374	2016-2-5	Certificate of Service – FL 4th Supplemental Production to GA
375	2016-2-5	Certificate of Service – FL Third-Party Production to GA
376	2016-2-9	Certificate of Service – FL 5th Supplemental Production to GA
377	2016-2-10	Certificate of Service – FL Third-Party Production to GA
378	2016-2-10	Certificate of Service – FL 6th Supplemental Production to GA
379	**2016-2-11**	**Transcript of Status Conference 2/9/16**
380	2016-2-11	Certificate of Service – FL Third-Party Production to GA

381	2016-2-12	Certificate of Service – FL 7th Supplemental Production to GA
382	2016-2-12	Certificate of Service – FL 5th Supplemental Response to GA 1st Interrogatories
383	2016-2-12	Certificate of Service – FL 3rd Supplemental Response to GA 3rd Interrogatories
384	2016-2-14	Certificate of Service – GA 27th Production to FL
385	2016-2-19	Certificate of Service – FL 4th Supplemental Response to GA 3rd Interrogatories
386	2016-2-19	Certificate of Service – FL 6th Supplemental Response to GA 1st Interrogatories
387	2016-2-19	Certificate of Service – FL 8th Supplemental Production to GA
388	2016-2-23	Certificate of Service – FL 9th Supplemental Production to GA
389	2016-2-26	Certificate of Service – GA 28th Production to FL
390	2016-2-27	Certificate of Service – FL 7th Supplemental Response to GA 1st Interrogatories
391	2016-2-27	Certificate of Service – FL 10th Supplemental Production to GA

392	2016-2-29	GA's Expert Designation and Notice of Service of Expert Report
393	2016-2-29	FL's Expert Designation
394	2016-2-29	Certificate of Service – FL Expert Reports
395	2016-2-29	Certificate of Service – FL 1st Expert Document Production
396	2016-2-29	Certificate of Service – FL 5th Supplemental Response to GA 3rd Interrogatories
397	2016-3-2	Certificate of Service – FL Third-Party Production to GA
398	2016-3-4	FL Status Report
399	2016-3-4	GA Status Report
400	2016-3-8	Certificate of Service – FL's Notice of Deposition
401	2016-3-10	A. Winsor Correspondence to Clerk of U.S. Supreme Court
402	2016-3-10	A. Winsor Correspondence to Special Master
403	**2016-3-10**	**Transcript of Status Conference 3/8/16**
404	2016-3-11	FL's Notice of Withdrawal, Appearance and Substitution of Counsel of Record (re 401,402)
405	2016-3-11	Certificate of Service – GA 29th Production to FL
406	2016-3-14	GA's Motion for Extension of Expert Discovery Deadlines

407	2016-3-15	FL's Response to GA's Motion for Extension of Expert Discovery Deadlines (re 406)
408	2016-3-15	D. Allon Letter to Special Master
409	**2016-3-16**	**Case Management Order No. 16** (re 408)
410	2016-3-16	GA's Reply in Support of Motion for Extension of Expert Discovery Deadlines (re 406)
411	2016-3-17	Certificate of Service – FL Updated Privilege Log
412	**2016-3-21**	**J. Dunlap Email Notice to Counsel re Status Conference Schedule**
413	2016-3-22	Certificate of Service – FL Second Updated Privilege Log
414	**2016-3-24**	**Case Management Order No. 17** (re 406)
415	2016-3-25	Certificate of Service – GA Notice of Deposition
416	2016-4-1	FL Status Report
417	2016-4-1	GA Status Report
418	2016-4-1	Certificate of Service – GA Notices of Deposition
419	2016-4-6	Certificate of Service – GA Third-Party Production to FL
420	**2016-4-7**	**Transcript of Telephone Conference 4/5/16**

421	2016-4-12	Certificate of Service – GA Second Updated Privilege Log
422	2016-4-13	S. Carter Letter to Special Master
423	2016-5-6	FL Status Report
424	2016-5-6	GA Status Report
425	**2016-5-12**	**Transcript of Status Conference 5/10/16**
426	2016-5-20	Certificate of Service – FL Defensive Expert Reports
427	2016-5-20	Certificate of Service – FL Defensive Expert Document Production
428	2016-5-20	Certificate of Service – GA Defensive Expert Disclosure and Reports
429	2016-5-20	Certificate of Service – GA Responsive Expert Document Production
430	2016-5-23	FL's Motion for Extension of Expert Discovery
431	2016-5-23	M. Goldstein Letter to Special Master
432	**2016-5-25**	**J. Dunlap Correspondence to M. Goldstein** (re 431)
433	2016-5-25	GA's Response to FL's Motion to Extend Expert Discovery (re 430)
434	2016-6-2	Certificate of Service – FL's Notice of Deposition

435	2016-6-2	Certificate of Service – FL's Notice of Deposition
436	2016-6-2	Certificate of Service – FL's Notice of Deposition
437	2016-6-2	Certificate of Service – FL's Notice of Deposition
438	2016-6-2	Certificate of Service – FL's Notice of Deposition
439	2016-6-2	Certificate of Service – FL's Notice of Deposition
440	2016-6-2	Certificate of Service – FL's Notice of Deposition
441	2016-6-2	Certificate of Service – FL's Notice of Deposition
442	2016-6-3	GA Status Report
443	2016-6-3	FL Status Report
444	2016-6-6	GA Proposed Trial Schedule
445	2016-6-6	FL Proposed Trial Schedule
446	**2016-6-9**	**Transcript of Status Conference 6/8/16**
447	**2016-6-13**	**J. Dunlap Email Notice to Counsel re Conference Schedule**
448	**2016-6-20**	**Case Management Order No. 19**
449	2016-6-30	FL's Request for Minor Clarifications to Case Management Order No. 19

450	2016-6-30	GA's Objections to Case Management Order No. 19
451	2016-7-1	FL Status Report
452	2016-7-1	GA Status Report
453	**2016-7-6**	**J. Dunlap Email Notice to Counsel re Telephone Conference** (re 449,450)
454	**2016-7-13**	**Case Management Order No. 20**
455	**2016-7-14**	**Transcript of Telephone Conference 7/12/16**
456	**2016-7-18**	**M. Clifford Email Notice to Counsel re Telephone Conference**
457	**2016-7-27**	**Transcript of Telephone Conference 7/26/16**
458	**2016-7-27**	**Case Management Order No. 21**
459	**2016-8-1**	**J. Dunlap Correspondence to Counsel** (re 454,458)
460	2016-8-5	FL Status Report
461	2016-8-5	GA Status Report
462	**2016-8-8**	**J. Dunlap Email Notice to Counsel**
463	**2016-8-29**	**J. Dunlap Email Notice to Counsel**
464	2016-9-2	GA Status Report
465	2016-9-2	FL Status Report

466	2016-9-9	Ruhl Motion for Leave to File an Amicus Brief
467	2016-9-12	Motion for Leave to Withdraw of D. Blankenau and T. Wilmoth
468	2016-9-12	Certificate of Service – FL Production of Documents to GA
469	2016-9-14	Certificate of Service – GA Notices of Deposition
470	2016-9-15	National Audubon Society, Defenders of Wildlife, Florida Wildlife Federation, and Apalachicola Riverkeeper Motion for Permission to File Amicus Curiae Brief
471	2016-9-16	GA's Motion to Submit Trial Exhibits Under Seal or with Redactions
472	2016-9-16	GA's Motion to Exclude Opinions and Testimony by Florida Based on the "Lake Seminole" Model
473	2016-9-16	FL's Motion in Limine to Preclude Expert Testimony by Dr. Irmak
474	2016-9-16	FL's Motion in Limine to Preclude Expert Testimony by Dr. Bedient and Dr. Panday
475	2016-9-16	FL's Motion to Withhold Information in Trial Exhibit from the Public Record

476	2016-9-16	Certificate of Service – FL Supplemental Responses to GA Interrogatories
477	**2016-9-16**	**Order on Motion to Withdraw** (re 467)
478	2016-9-16	Lake Lanier Association, Inc. Motion for Leave to File an Amicus Brief
479	2016-9-16	Georgia Farm Bureau Federation Motion for Leave to File Brief of Amicus Curiae
480	2016-9-16	Atlanta Regional Commission Motion for Leave to Participate as Amicus Curiae
481	2016-9-16	State of Alabama Motion for Leave to File Pretrial Amicus Curiae Brief
482	2016-9-16	Metro Atlanta Chamber of Commerce, Inc., Regional Business Coalition of Metropolitan Atlanta, Inc. and Georgia Chamber of Commerce, Inc. Motion for Leave to File an Amicus Brief
483	2016-9-16	Georgia Agribusiness Council, Inc., Georgia Green Industry Association, Inc. and Georgia Urban Agriculture Council, Inc. Motion for Permission to File Amicus Curiae Brief

484	2016-9-16	Georgia Municipal Association, Association County Commissioners of Georgia, Georgia Association of Water Professionals and Georgia Conservancy Motion for Leave to File a Brief as Amicus Curiae
485	2016-9-16	Chattahoochee Riverkeeper, Flint Riverkeeper and Alabama Rivers Alliance Motion for Leave to File an Amicus Curiae Brief
486	2016-9-16	American Peanut Shellers Association and Georgia Fruit and Vegetable Growers Association Motion for Leave to File Amicus Curiae Brief
487	2016-9-16	State of Colorado Motion for Leave to File Brief as Amicus Curiae
488	**2016-9-21**	**Order on Motions for Leave to File Amicus Briefs** (re 466,470,478,479,480,481,482, 483,484,485,486,487)
489	**2016-9-22**	**J. Dunlap Email Notice to Counsel re Final Pre-Trial Status Conference**
490	2016-9-30	FL's Opposition to GA's Motion to Exclude Opinions and Testimony by Florida Based on the "Lake Seminole" Model (re 472)

491	2016-9-30	FL's Response to GA's Motion to Submit Trial Exhibits Under Seal or with Redactions (re 471)
492	2016-9-30	GA's Opposition to FL's Motion in Limine Regarding Expert Testimony of Dr. Suat Irmak (re 473)
493	2016-9-30	GA's Opposition to FL's Motion in Limine Regarding "Lost Water" in Florida (re 474)
494	2016-10-7	FL's Status Report
495	2016-10-7	GA's Status Report
496	2016-10-7	FL's Reply in Support of Motion in Limine to Exclude the Testimony by Dr. Irmak (re 473,492)
497	2016-10-7	GA's Reply Brief in Support of Motion to Exclude Opinions and Testimony by Florida Basded on the "Lake Seminole" Model (re 472,490)
498	2016-10-7	FL's Reply Memo to Preclude Expert Testimony by Drs. Bedient and Panday on 'Lost Water' (re 474,493)
499	**2016-10-11**	**Order Regarding Use of Electronic Equipment**
500	2016-10-11	Certificate of Service – GA Document Production
501	2016-10-12	FL's Pretrial Brief

502	2016-10-12	GA's Pretrial Brief
503	**2016-10-13**	**Transcript of Status Conference 10/11/16**
504	2016-10-14	P. Perry Letter to Special Master
505	2016-10-14	Certificate of Service – FL Pre-Filed Direct Testimony
506	2016-10-17	C. Primis Letter to Special Master (re 504)
507	2016-10-18	P. Perry Letter to Special Master (re 504,506)
508	2016-10-19	C. Primis Letter to Special Master
509	2016-10-19	P. Perry Letter to Special Master (re 508)
510	2016-10-19	Amicus Brief of J.B. Ruhl
511	2016-10-20	G. Chipev Correspondence to J. Dunlap
512	**2016-10-20**	**J. Dunlap Correspondence to G. Chipev** (re 511)
513	**2016-10-20**	**Order of Special Master** (re 504,506,507,508,509)
514	2016-10-21	Proposed Order on Georgia's Motion to Submit Trial Exhibits Under Seal or with Redactions and Florida's Motion to Withhold Information in Trial Exhibit From the Public Record
515	2016-10-21	M. Gray Letter to Special Master

516	2016-10-21	Amicus Brief of Chattahoochee Riverkeeper; Flint Riverkeeper; and Alabama Rivers Alliance
517	2016-10-21	Amicus Brief of Georgia Farm Bureau Federation
518	2016-10-21	Amicus Brief of State of Colorado
519	2016-10-21	Amicus Brief of The Atlanta Regional Commission
520	2016-10-21	Amicus Brief of State of Alabama
521	2016-10-21	Amicus Brief of The Georgia Municipal Association; The Association County Commissioners of Georgia; The Georgia Association of Water Professionals; and The Georgia Conservancy
522	2016-10-21	Amicus Brief of The Georgia Agribusiness Council, Inc.; Georgia Green Industry Association, Inc.; and The Georgia Urban Agriculture Council, Inc.
523	2016-10-21	Amicus Brief of The Metro Atlanta Chamber of Commerce, Inc.; Regional Business Coalition of Metropolitan Atlanta, Inc.; and Georgia Chamber of Commerce, Inc.
524	2016-10-21	Amicus Brief of National Audubon Society; Defenders of Wildlife; Florida Wildlife

		Federation; and Apalachicola Riverkeeper
525	2016-10-22	Amicus Brief of American Peanut Shellers Association and Georgia Fruit and Vegetable Growers Associations
526	**2016-10-24**	**Order on Georgia's Motion to Submit Trial Exhibits Under Seal or with Redactions and Florida's Motion to Withhold Information in Trial Exhibit from the Public Record** (re 471,475,514)
527	2016-10-26	C. Primis Letter to Special Master
528	2016-10-26	Certificate of Service – GA Pre-Filed Direct Testimony
529	2016-10-26	FL's Updated Pretrial Brief
530	2016-10-26	FL's Summary of Updated Pretrial Brief (re 529)
531	2016-10-26	Certificate of Service – FL Updated Pre-Filed Direct Testimony
532	2016-10-26	Trial Exhibit List
533	2016-11-4	FL Pre-Filed Direct Testimony – Affidavit of D. Hicks (re 505)
534	2016-11-4	FL Pre-Filed Direct Testimony – J. Allan (Updated) (re 531)
535	2016-11-4	FL Pre-Filed Direct Testimony – R. Beaton (Updated) (re 531)

536	2016-11-4	FL Pre-Filed Direct Testimony – M. Berrigan (Updated) (re 531)
537	2016-11-4	FL Pre-Filed Direct Testimony – A. Bottcher (Updated) (re 531)
538	2016-11-4	FL Pre-Filed Direct Testimony – B. Cyphers (re 505)
539	2016-11-4	FL Pre-Filed Direct Testimony – S. Douglass (re 505)
540	2016-11-4	FL Pre-Filed Direct Testimony – S. Flewelling (re 505)
541	2016-11-4	FL Pre-Filed Direct Testimony – P. Glibert (Updated) (re 531)
542	2016-11-4	FL Pre-Filed Direct Testimony – M. Greenblatt (re 505)
543	2016-11-4	FL Pre-Filed Direct Testimony – S. Hartsfield (re 505)
544	2016-11-4	FL Pre-Filed Direct Testimony – T. Hoehn (Updated) (re 531)
545	2016-11-4	FL Pre-Filed Direct Testimony – G. Hoogenboom (re 505)
546	2016-11-4	FL Pre-Filed Direct Testimony – G. Hornberger (Updated) (re 531)
547	2016-11-4	FL Pre-Filed Direct Testimony – D. Kimbro (Updated) (re 531)
548	2016-11-4	FL Pre-Filed Direct Testimony – G. Kondolf (re 505)

549	2016-11-4	FL Pre-Filed Direct Testimony – D. Langseth (Updated) (re 531)
550	2016-11-4	FL Pre-Filed Direct Testimony – D. Lettenmaier (re 505)
551	2016-11-4	FL Pre-Filed Direct Testimony – S. Scyphers (re 505)
552	2016-11-4	FL Pre-Filed Direct Testimony – P. Shanahan (Updated) (re 531)
553	2016-11-4	FL Pre-Filed Direct Testimony – J. Steverson (Updated) (re 531)
554	2016-11-4	FL Pre-Filed Direct Testimony – D. Struhs (re 505)
555	2016-11-4	FL Pre-Filed Direct Testimony – D. Sunding (Updated) (re 531)
556	2016-11-4	FL Pre-Filed Direct Testimony – E. Sutton (Updated) (re 531)
557	2016-11-4	FL Pre-Filed Direct Testimony – T. Ward (re 505)
558	2016-11-4	FL Pre-Filed Direct Testimony – J. White (Updated) (re 531)
559	2016-11-4	GA Pre-Filed Direct Testimony – P. Bedient (re 528)
560	2016-11-4	GA Pre-Filed Direct Testimony – R. Cantor (re 528)
561	2016-11-4	GA Pre-Filed Direct Testimony – C. Couch (re 528)

562	2016-11-4	GA Pre-Filed Direct Testimony – G. Cowie (re 528)
563	2016-11-4	GA Pre-Filed Direct Testimony – S. Irmak (re 528)
564	2016-11-4	GA Pre-Filed Direct Testimony – A. Kirkpatrick (re 528)
565	2016-11-4	GA Pre-Filed Direct Testimony – R. Lipcius (re 528)
566	2016-11-4	GA Pre-Filed Direct Testimony – M. Masters (re 528)
567	2016-11-4	GA Pre-Filed Direct Testimony – P. Mayer (re 528)
568	2016-11-4	GA Pre-Filed Direct Testimony – W. McAnally (re 528)
569	2016-11-4	GA Pre-Filed Direct Testimony – C. Menzie (re 528)
570	2016-11-4	GA Pre-Filed Direct Testimony – S. Panday (re 528)
571	2016-11-4	GA Pre-Filed Direct Testimony – H. Reheis (re 528)
572	2016-11-4	GA Pre-Filed Direct Testimony – R. Stavins (re 528)
573	2016-11-4	GA Pre-Filed Direct Testimony – J. Turner (re 528)
574	2016-11-4	GA Pre-Filed Direct Testimony – W. Zeng (re 528)
575	**2016-12-6**	**Courtroom Minutes: Trial Proceedings**
576	**2016-12-6**	**Trial Witness List**

577	**2016-12-14**	**J. Dunlap Correspondence to M. Gray**
578	2016-12-14	M. Gray Letter to Special Master
579	**2016-12-14**	**J. Dunlap Correspondence to M. Gray** (re 578)
580	2016-12-14	FL Pre-Filed Direct Testimony – P. Shanahan (2nd Updated)
581	**2016-12-14**	**Final Trial Exhibit List**
582	**2016-12-15**	**Trial Transcript Vol XIV – 11-22-16**
583	2016-12-15	FL Objections to Pre-Filed Direct Testimony of P. Bedient (re 559)
584	2016-12-15	FL Objections to Pre-Filed Direct Testimony of C. Couch (re 561)
585	2016-12-15	FL Objections to Pre-Filed Direct Testimony of G. Cowie (re 562)
586	2016-12-15	FL Objections to Pre-Filed Direct Testimony of A. Kirkpatrick (re 564)
587	2016-12-15	FL Objections to Pre-Filed Direct Testimony of R. Lipcius (re 565)
588	2016-12-15	FL Objections to Pre-Filed Direct Testimony of M. Masters (re 566)

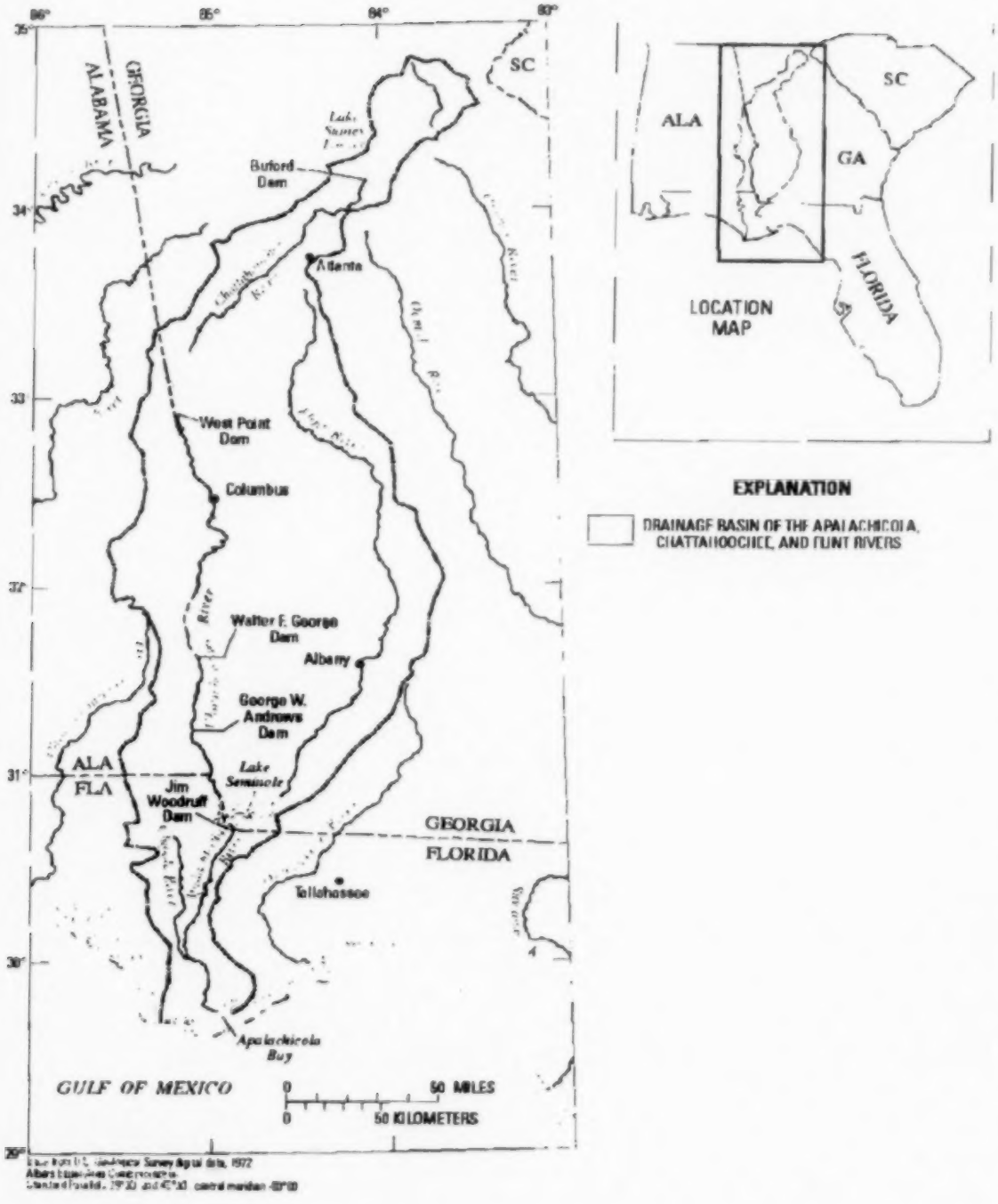
589	2016-12-15	FL Objections to Pre-Filed Direct Testimony of P. Mayer (re 567)
590	2016-12-15	FL Objections to Pre-Filed Direct Testimony of W. McAnally (re 568)
591	2016-12-15	FL Objections to Pre-Filed Direct Testimony of C. Menzie (re 569)
592	2016-12-15	FL Objections to Pre-Filed Direct Testimony of W. Panday (re 570)
593	2016-12-15	FL Objections to Pre-Filed Direct Testimony of H. Reheis (re 571)
594	2016-12-15	FL Objections to Pre-Filed Direct Testimony of R. Stavins (re 572)
595	2016-12-15	FL Objections to Pre-Filed Direct Testimony of J. Turner (re 573)
596	2016-12-15	FL Objections to Pre-Filed Direct Testimony of W. Zeng (re 574)
597	2016-12-15	GA Objections to Pre-Filed Direct Testimony of B. Beaton (re 535)
598	2016-12-15	GA Objections to Pre-Filed Direct Testimony of M. Berrigan (re 536)

599	2016-12-15	GA Objections to Pre-Filed Direct Testimony of B. Cyphers (re 538)
600	2016-12-15	GA Objections to Pre-Filed Direct Testimony of P. Glibert (re 541)
601	2016-12-15	GA Objections to Pre-Filed Direct Testimony of M. Greenblatt (re 542)
602	2016-12-15	GA Objections to Pre-Filed Direct Testimony of T. Hoehn (re 544)
603	2016-12-15	GA Objections to Pre-Filed Direct Testimony of G. Hornberger (re 546)
604	2016-12-15	GA Objections to Pre-Filed Direct Testimony of D. Kimbro (re 547)
605	2016-12-15	GA Objections to Pre-Filed Direct Testimony of G. Kondolf (re 548)
606	2016-12-15	GA Objections to Pre-Filed Direct Testimony of D. Lettenmaier (re 550)
607	2016-12-15	GA Objections to Pre-Filed Direct Testimony of P. Shanahan (re 580)
608	2016-12-15	GA Objections to Pre-Filed Direct Testimony of D. Struhs (re 554)

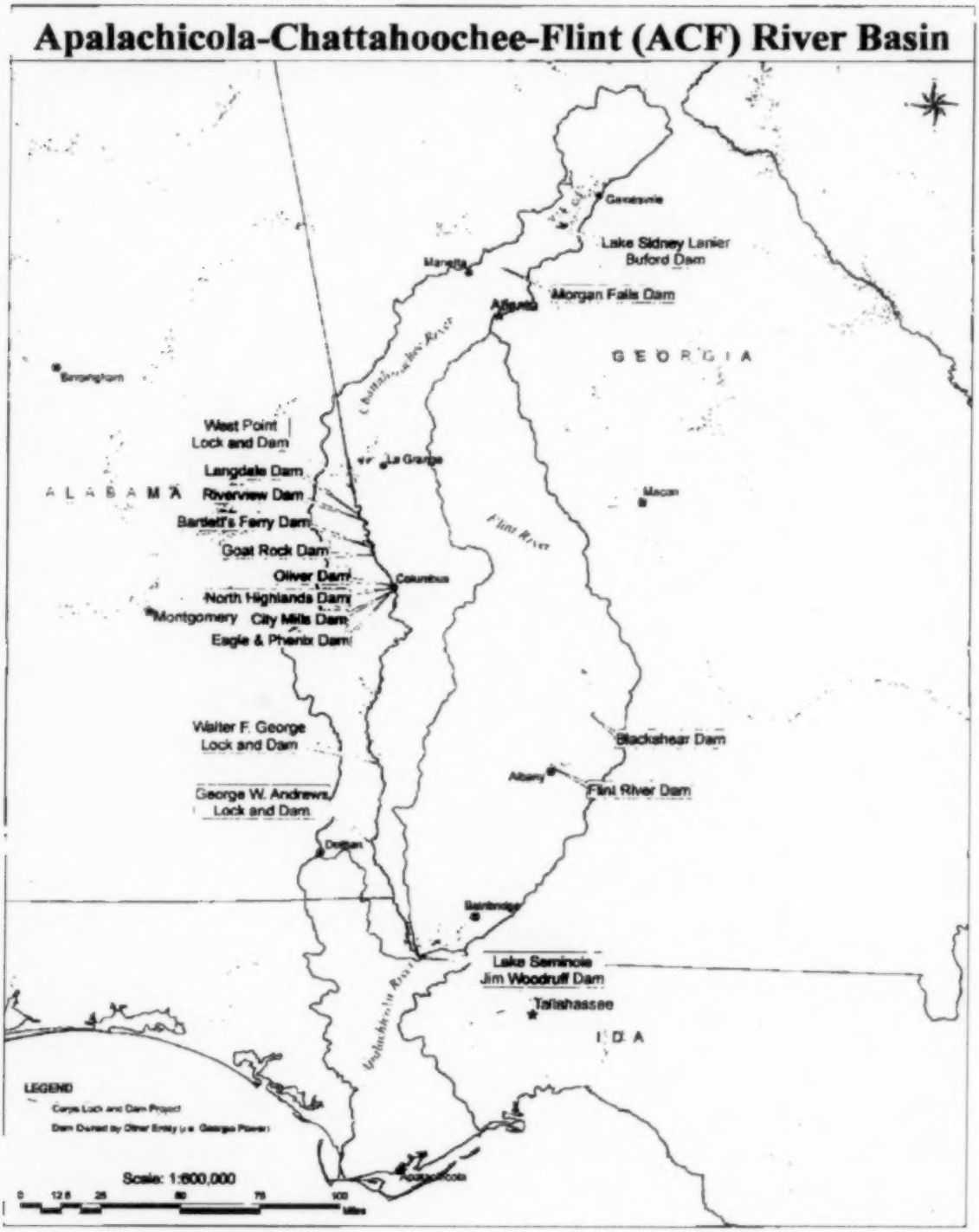
609	2016-12-15	GA Objections to Pre-Filed Direct Testimony of D. Sunding (re 555)
610	2016-12-15	GA Objections to Pre-Filed Direct Testimony of E. Sutton (re 556)
611	2016-12-15	GA Objections to Pre-Filed Direct Testimony of W. White (re 558)
612	**2016-12-15**	**Trial Transcript Vol. I – 10/31/16**
613	**2016-12-15**	**Trial Transcript Vol. II – 11/1/16**
614	**2016-12-15**	**Trial Transcript Vol. III – 11/3/16**
615	**2016-12-15**	**Trial Transcript Vol. IV – 11/4/16**
616	**2016-12-15**	**Trial Transcript Vol. V – 11/7/16**
617	**2016-12-15**	**Trial Transcript Vol. VI – 11/8/16**
618	**2016-12-15**	**Trial Transcript Vol. VII – 11/9/16**
619	**2016-12-15**	**Trial Transcript Vol. VIII – 11/10/16**
620	**2016-12-15**	**Trial Transcript Vol. IX – 11/14/16**
621	**2016-12-15**	**Trial Transcript Vol. X – 11/16/16**

622	**2016-12-15**	**Trial Transcript Vol. XI – 11/17/16**
623	**2016-12-15**	**Trial Transcript Vol. XII – 11/18/16**
624	**2016-12-15**	**Trial Transcript Vol. XIII – 11/21/16**
625	**2016-12-15**	**Trial Transcript Vol. XIV – 11/22/16**
626	**2016-12-15**	**Trial Transcript Vol. XV – 11/29/16**
627	**2016-12-15**	**Trial Transcript Vol. XVI – 11/30/16**
628	**2016-12-15**	**Trial Transcript Vol. XVII – 12/1/16**
629	2016-12-15	GA's Post-Trial Brief
630	2016-12-15	FL's Post-Trial Brief
631	2016-12-15	United States' Post-Trial Brief as Amicus Curiae
632	2016-12-29	GA's Response to FL's Post-Trial Brief (re 630)
633	2016-12-29	FL's Response to GA's Post-Trial Brief (re 629)
634	**2017-1-3**	**Case Management Order No. 22**
635	2017-1-11	J. Neiman Letter to Special Master (re 634)

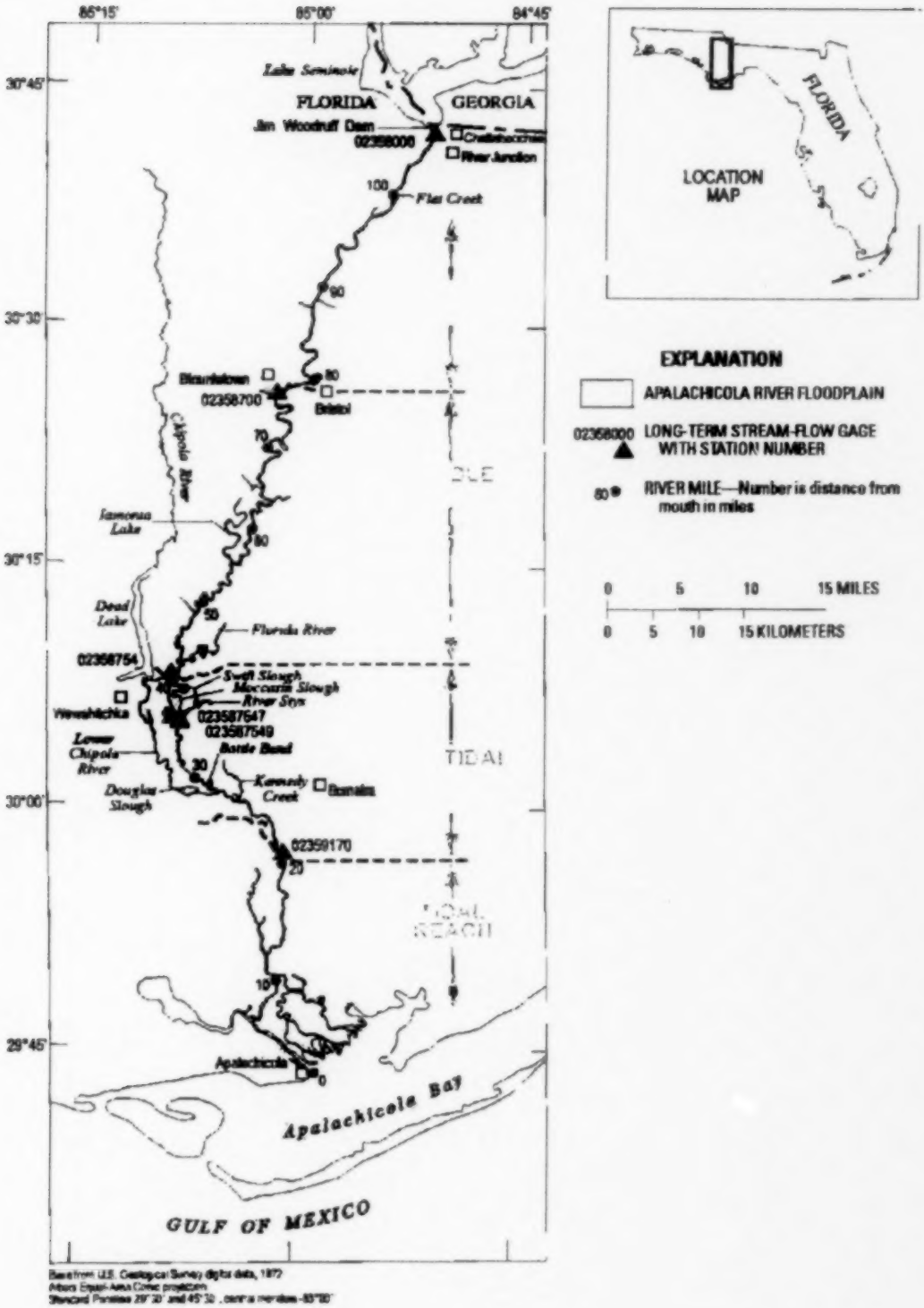
APPENDIX B


86°
85°
84°
83°
35°
34°
33°
32°
31°
30°
29°
ALABAMA
GEORGIA
SC
Lake Sumter
Buford Dam
Atlanta
West Point Dam
Columbus
Walter F. George Dam
Albany
George W. Andrews Dam
Lake Seminole
Jim Woodruff Dam
ALA
FLA
GEORGIA
FLORIDA
Tallahassee
Apalachicola Bay
GULF OF MEXICO
0 50 MILES
0 50 KILOMETERS
ALA
SC
GA
FLORIDA
LOCATION MAP
EXPLANATION
DRAINAGE BASIN OF THE APALACHICOLA, CHATTAHOOCHEE, AND FLINT RIVERS

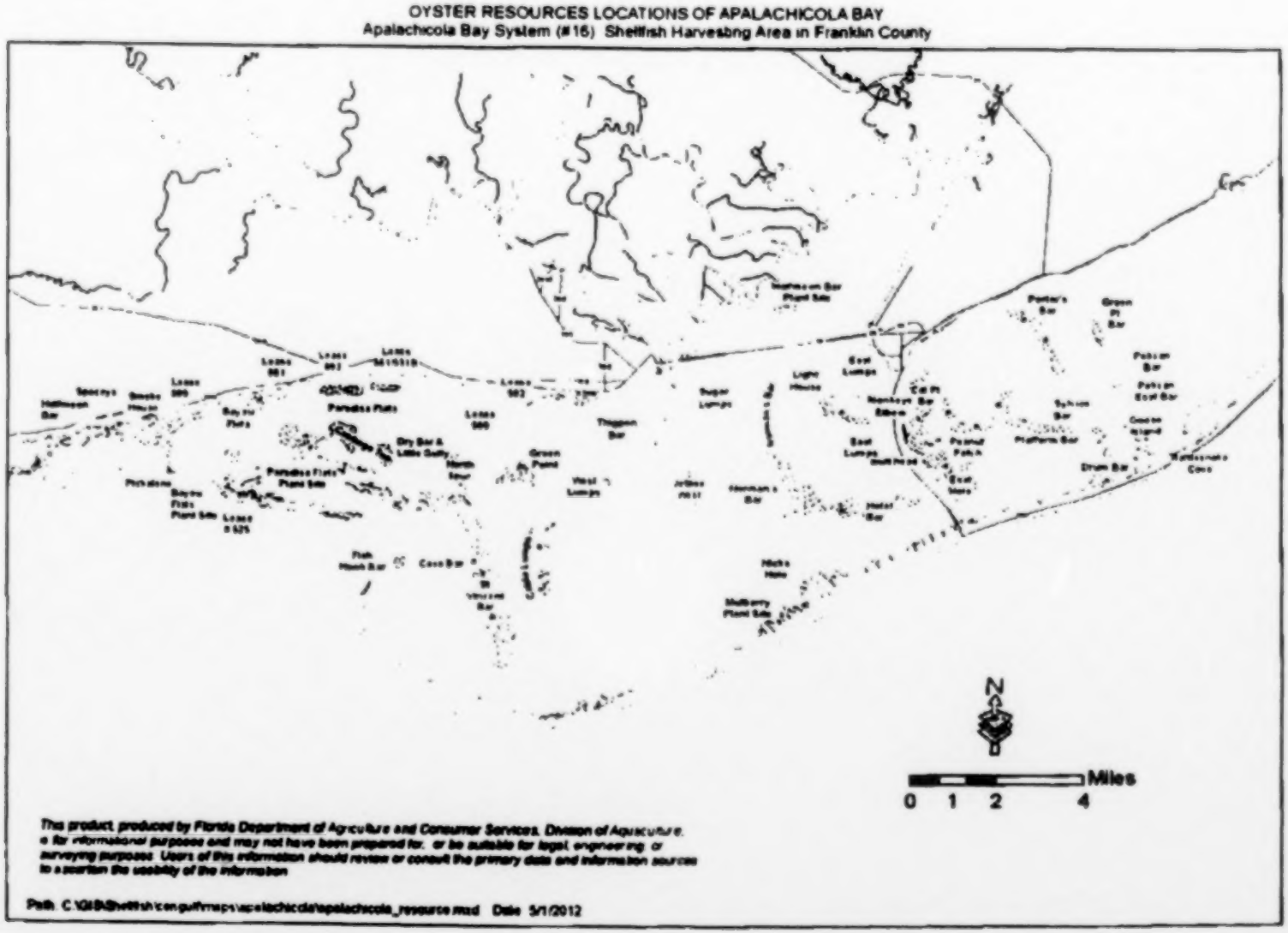
APPENDIX C


Apalachicola-Chattahoochee-Flint (ACF) River Basin
Gainesville
Lake Sidney Lanier
Buford Dam
Morgan Falls Dam
GEORGIA
Birmingham
West Point
Lock and Dam
Langdale Dam
Riverview Dam
Bartlett's Ferry Dam
Goat Rock Dam
Oliver Dam
North Highlands Dam
City Mills Dam
Eagle & Phenix Dam
ALABAMA
Montgomery
Columbus
Macon
Walter F. George
Lock and Dam
George W. Andrews
Lock and Dam
Blackshear Dam
Flint River Dam
Albany
Lake Seminole
Jim Woodruff Dam
Tallahassee
FLORIDA
LEGEND
Scale: 1:600,000

APPENDIX D


85°15'
85°00'
84°45'
30°45'
30°30'
30°15'
30°00'
29°45'
Lake Seminole
FLORIDA
GEORGIA
Jim Woodruff Dam
02358000
Chattahoochee
River Junction
100
Flat Creek
90
Blountstown
80
02358700
Bristol
70
Chipola River
Jamerina Lake
60
Dead Lake
50
Florida River
02358754
Swift Slough
Moccasin Slough
River Styx
Wewahitchka
023587547
023587549
Lower Chipola River
Battle Bend
30
Douglas Slough
Kennedy Creek
Bascom
02359170
20
TIDAL REACH
10
Apalachicola
0
Apalachicola Bay
GULF OF MEXICO
TIDAL
FLORIDA
LOCATION MAP
EXPLANATION
APALACHICOLA RIVER FLOODPLAIN
02358000 LONG-TERM STREAM-FLOW GAGE WITH STATION NUMBER
80 RIVER MILE—Number is distance from mouth in miles
0 5 10 15 MILES
0 5 10 15 KILOMETERS

APPENDIX E


OYSTER RESOURCES LOCATIONS OF APALACHICOLA BAY
Apalachicola Bay System (#16) Shellfish Harvesting Area in Franklin County
N
Miles
0 1 2 4
This product, produced by Florida Department of Agriculture and Consumer Services, Division of Aquaculture,
is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or
surveying purposes. Users of this information should review or consult the primary data and information sources
to ascertain the usability of the information.
Path: C:\GIS\Shellfish\cengulfmaps\apalachicola\apalachicola_resource.mxd Date: 5/1/2012

APPENDIX F

UNITED STATES SUPREME COURT

Florida v. Georgia
No. 142, Original
Witness List

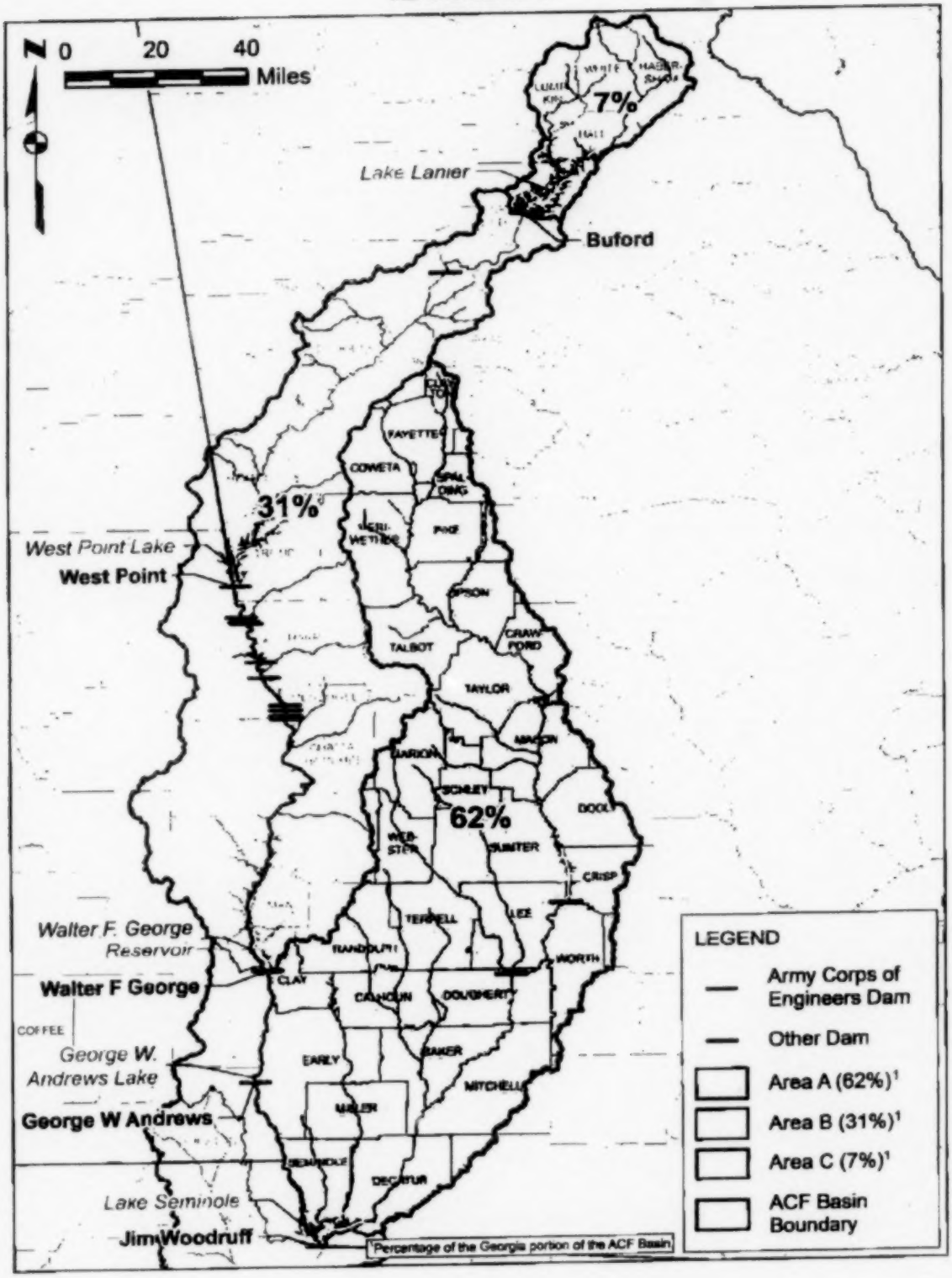
Case Name: Florida v. Georgia Case No.: No. 142, Original	Proceeding Type: Trial
Special Master: Ralph I. Lancaster, Jr.	
Courtroom Deputy: Devon F. Richards	
Court Reporter: Claudette Mason	
Florida's Attorneys: Phillip J. Perry, Esq. Jamie L. Wine, Esq. Abid Qureshi, Esq. Christopher Fawal, Esq. Matt Leopold, Esq. Paul Singarella, Esq.	Georgia's Attorneys: Craig Primis, Esq. Barack Echols, Esq. Winn Allen, Esq. Devora Allon, Esq. Karen DeSantis, Esq. Zachary Avallone, Esq. Emily Merki, Esq. Josh Mahoney, Esq.

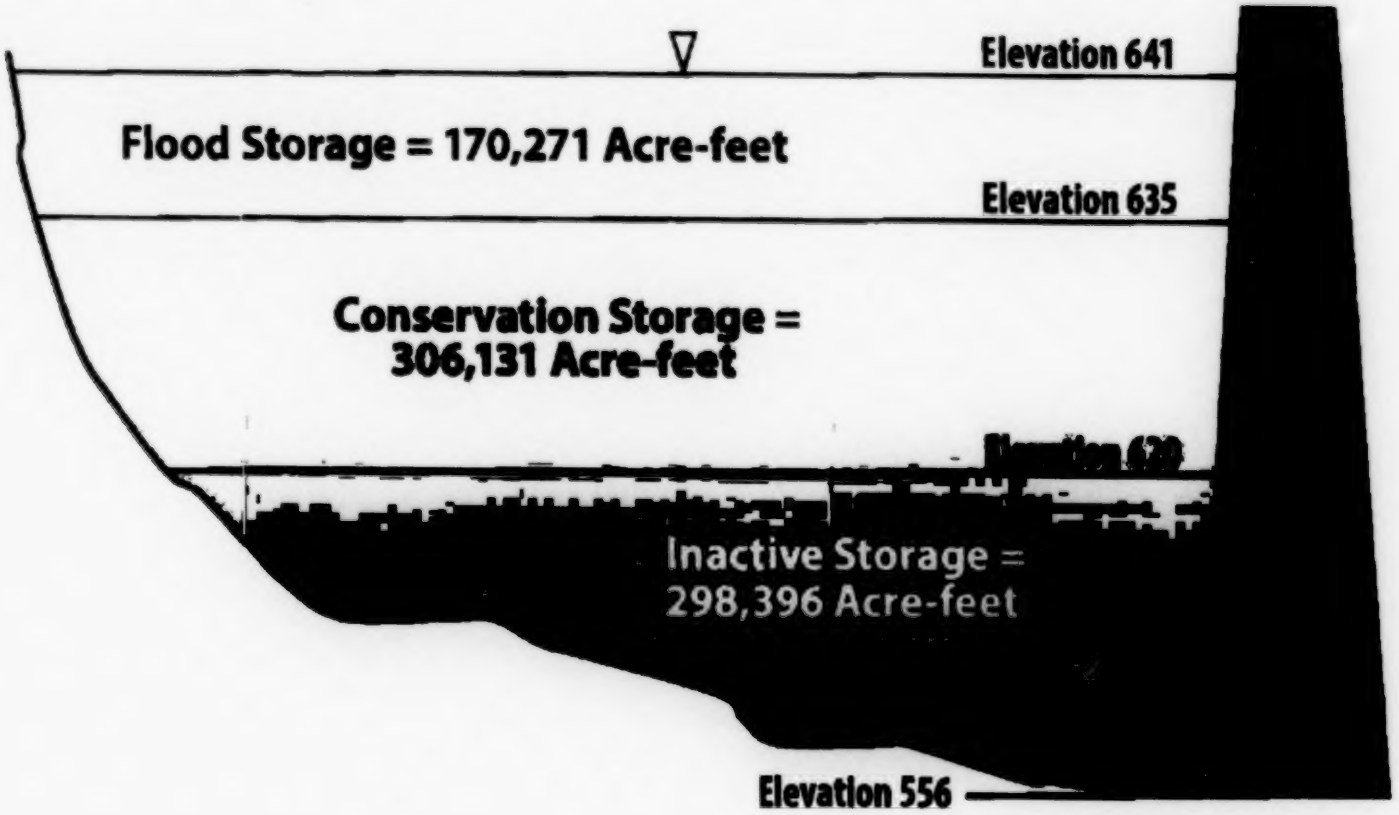
FL	GA	Date	**WITNESS**
X		10/31/16	Jonathan Paul Steverson
X		10/31/16	Video Deposition – Napoleon Caldwell
X		10/31/16 & 11/1/16	Theodore S. Hoehn
X		11/1/16	David B. Struhs
X		11/1/16	Video Deposition – Judson Turner

X		11/1/16 & 11/3/16	Dr. John David Allan
X		11/3/16	Harold F. Reheis
X		11/3/16 & 11/4/16	Mark Berrigan
X		11/7/16	Robert Beaton
X		11/7/16 & 11/8/16	Phillip Eric Sutton
X		11/8/16	Dr. David L. Kimbro
X		11/9/16	Dr. James Willson White, III
X		11/9/16	Dr. Marcia Greenblatt
X		11/9/16	Thomas Ward
X		11/9/16	Dr. Patricia M. Glibert
X		11/10/16	Dr. George Hornberger
X		11/10/16	Brett Cyphers
X		11/14/16	Video Deposition – Jason Wisniewski
X		11/14/16	Dr. Gail Cowie
X		11/16/16	Dr. Dennis Lettenmaier
X		11/16/16	Dr. Peter Shanahan
X		11/16/16 & 11/17/16	Dr. George M. Kondolf
X		11/17/16	Dr. David Sunding
	X	11/18/16	Judson Turner
	X	11/18/16	Dr. Carol Couch
	X	11/21/16	Dr. Wei Zeng
	X	11/21/16	Anna K. Kirkpatrick
	X	11/22/16	Peter Mayer
	X	11/22/16	Mark Masters
	X	11/29/16	Dr. Sorab Panday

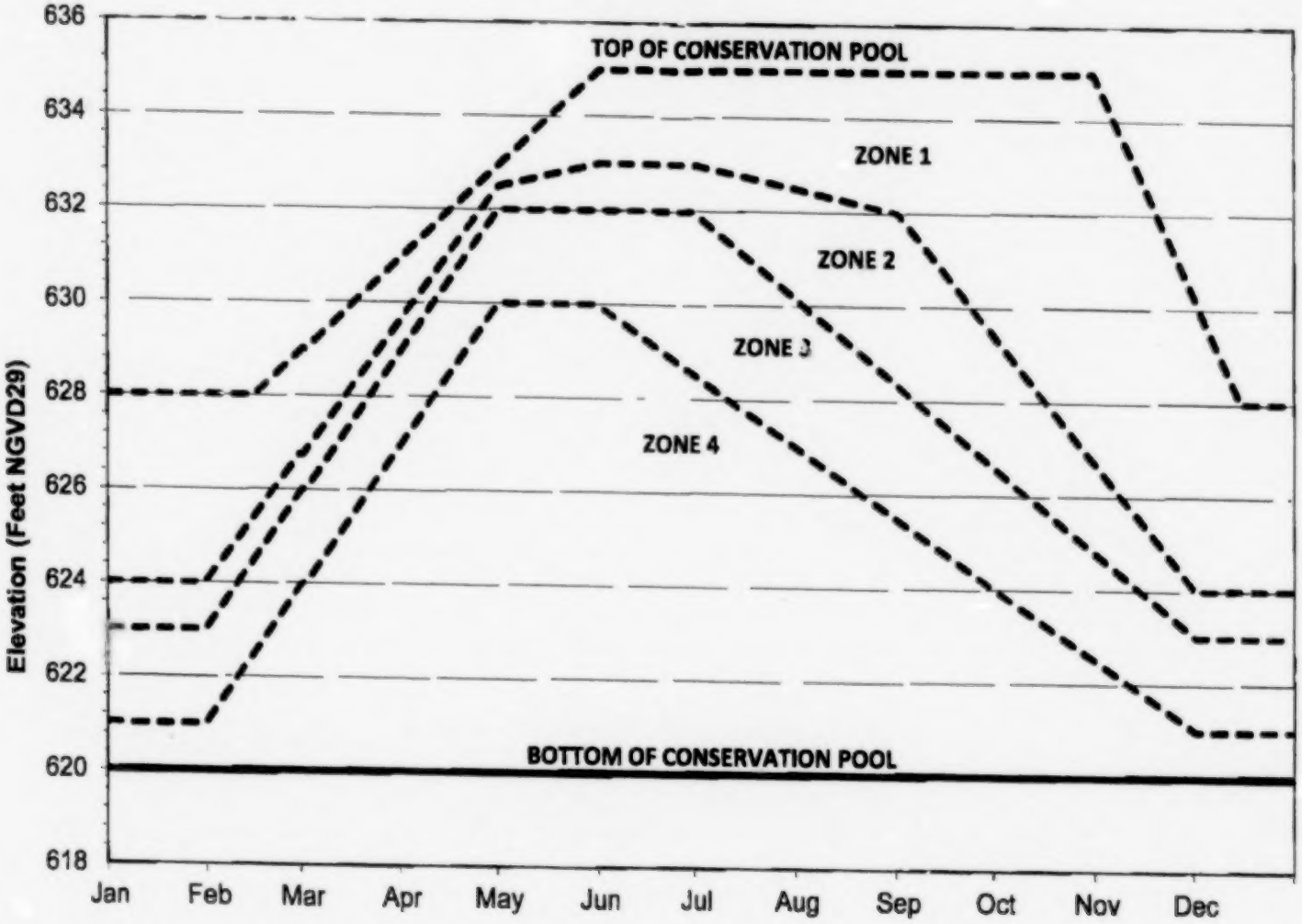
	X	11/29/16	Dr. Philip Bedient
	X	11/30/16	Video Deposition: Steven Leitman
	X	11/30/16	Dr. William McAnally
	X	11/30/16	Dr. Charles Menzie
	X	12/1/16	Video Deposition – Dr. Bill Pine
	X	12/1/16	Video Deposition – Dr. Karl Havens
	X	12/1/16	Dr. Romuale Lipcius
	X	12/1/16	Dr. Robert Stavins
X		On the papers	Dr. Steven Scyphers
	X	On the papers	Dr. Robin Cantor

APPENDIX G


N
0
20
40
Miles
7%
Lake Lanier
Buford
31%
West Point Lake
West Point
62%
Walter F. George
Reservoir
Walter F George
George W.
Andrews Lake
George W Andrews
Lake Seminole
Jim Woodruff
COFFEE
LEGEND
Army Corps of Engineers Dam
Other Dam
Area A (62%)[1]
Area B (31%)[1]
Area C (7%)[1]
ACF Basin Boundary
[1]Percentage of the Georgia portion of the ACF Basin


Elevation 641
Flood Storage = 170,271 Acre-feet
Elevation 635
Conservation Storage =
306,131 Acre-feet
Inactive Storage =
298,396 Acre-feet
Elevation 556

APPENDIX I


636
634
632
630
628
626
624
622
620
618
Elevation (Feet NGVD29)
TOP OF CONSERVATION POOL
ZONE 1
ZONE 2
ZONE 3
ZONE 4
BOTTOM OF CONSERVATION POOL
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

APPENDIX J

STATE OF FLORIDA

v.

STATE OF GEORGIA

No. 142, Original

[PROPOSED] DECREE

The Court having exercised original jurisdiction over this controversy between two sovereign States; the issues having been tried before the Special Master appointed by the Court; the Court having received briefs and heard oral argument on the parties' exceptions to the Report of the Special Master; and the Court having issued its Opinion announced in ___ S. Ct. ___ (____), IT IS HEREBY ORDERED, ADJUDGED, DECLARED AND DECREED AS FOLLOWS:

(a) For the reasons fully set forth in the Special Master's Report, we conclude that Florida has not proven by clear and convincing evidence that a decree imposing a cap on Georgia's consumptive water use would result in additional streamflow in Florida at a time that would provide a material benefit to Florida. Accordingly, we ADOPT the Special Master's recommendation and DENY Florida's request for relief.

(b) The party States shall share equally in the compensation of the Special Master and his assistant, and in the costs of this litigation incurred by the Special Master.

RECORD AND BRIEFS

No. 142, Original

OCT - 1 2013

In The
Supreme Court of the United States

STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

FLORIDA'S MOTION FOR LEAVE TO FILE A COMPLAINT, COMPLAINT, AND BRIEF IN SUPPORT OF MOTION

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No. ____, Original

In The
Supreme Court of the United States

STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

MOTION FOR LEAVE TO FILE A COMPLAINT

Pursuant to Supreme Court Rule 17, the State of Florida asks leave of the Court to file a complaint against the State of Georgia to equitably apportion the waters of the Apalachicola-Chattahoochee-Flint River Basin. This motion is accompanied by a complaint and supporting brief.

Respectfully submitted,

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Attorneys for the State of Florida

No. ____, Original

In The
Supreme Court of the United States

STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

COMPLAINT FOR EQUITABLE APPORTIONMENT AND INJUNCTIVE RELIEF

The State of Florida, plaintiff, on its own behalf and on behalf of the citizens of Florida, alleges as follows:

1. This is an action by the State of Florida to equitably apportion the interstate waters of the Apalachicola-Chattahoochee-Flint River Basin ("ACF Basin").

FACTUAL BACKGROUND

2. The Chattahoochee River arises in northern Georgia and flows 430 miles to its confluence with the Flint River at the Georgia-Florida state line. The southern half of the Chattahoochee River forms the

border between Georgia and Alabama. The Flint River also arises in the State of Georgia, before converging with the Chattahoochee River to form Florida's Apalachicola River (the "River"). The River flows into the Gulf of Mexico at the Apalachicola Bay (the "Bay"). Collectively, these three rivers and their surrounds comprise the ACF Basin. A map of the ACF Basin is provided at App. 1.

3. The waters of the Chattahoochee and Flint River Basins provide essential inflows to the Apalachicola River and Bay (collectively, the "Apalachicola Region" or the "Region"). The flow of the Apalachicola River at the Georgia-Florida border, and the resulting inflows to the River and Bay, are created by the combined inflows of the Chattahoochee and Flint Rivers, their tributaries and hydrologically connected groundwater. These waters have nourished a rare and exemplary ecosystem that state, national, and international bodies have recognized for the diversity of its plant and animal species.

4. The Apalachicola Region is also a unique and vibrant cultural, social and economic community, dependent primarily on the environmental health of the River and Bay. The ecosystem fuels a resource based economy that depends on the harvest of commercially salable species, most notably the Eastern Oyster. Generations of inhabitants have been defined by their existence in this economy and have lived, worked and prospered in a culturally rich community.

5. At present, the Apalachicola Region's ecosystem and economy are suffering serious harm because of Georgia's increasing storage and consumption of water from both the Chattahoochee and Flint River Basins. Large, and ever-increasing, amounts of water (taken both as surface water and the hydrologically connected groundwater) are withdrawn, impounded and consumed upstream for municipal, industrial, recreational, and agricultural uses permitted by Georgia. These uses are forcing Floridians to shoulder the heavy burden of Georgia's growth.

6. Florida fisheries have suffered declines as a result of Georgia's upstream storage and consumption of water from the Chattahoochee and Flint River Basins. Flow depletions from the Georgia portion of the ACF Basin have already shrunk available riverine and estuarine habitats in the Apalachicola Region and precipitated a collapse of Florida's oyster fishery. The federal government recently recognized the collapse and issued a fishery disaster declaration for the oyster industry in Florida.

7. Georgia officials have projected that Georgia's consumption of ACF Basin water will nearly double from present levels by 2040. *See* Affidavit of Judson H. Turner, Director of the Georgia Environmental Protection Division, provided at App. 3-27. If Georgia's consumption increases as planned, the sole source of fresh water sustaining the Apalachicola River and Bay will shrink further, jeopardizing the viability of the Apalachicola Region's ecology, economy, and way of life.

8. Before reaching Florida, the waters of the Chattahoochee River are temporarily stored in reservoirs owned and operated by the U.S. Army Corps of Engineers (the "Corps"). From 1990 through 2012, the Corps' operation of these reservoirs, and in particular operation of Buford Dam, which creates Lake Sidney Lanier in Georgia, was the focus of intense, multi-state and multi-jurisdiction litigation culminating in two decisions of the Circuit Courts of Appeals. *Se. Fed. Power Customers, Inc. v. Geren*, 514 F.3d 1316 (D.C. Cir. 2008); *In re MDL-1824 Tri-State Water Rights Litig.*, 644 F.3d 1160 (11th Cir. 2011). That litigation, directed solely at federal agencies, focused on the Corps' obligations under various federal statutes, including the Endangered Species Act ("ESA"), the Flood Control Act of 1944, the National Environmental Policy Act, the Rivers and Harbors Act of 1899, and the Water Supply Act of 1958. The lower court litigation did not, and could not, address the fundamental problem facing Florida – Georgia's ever-increasing storage and use of water that has historically nourished the Apalachicola Region.

9. A significant, yet ultimately unsuccessful, effort was made to resolve that problem. Beginning in the late 1990s, and into the early 2000s, Florida attempted to resolve its concerns through negotiation. In early 1992, Florida, Georgia, and Alabama (collectively, the "States") commenced a process to study the needs of the ACF Basin ("Comprehensive Study"). The Comprehensive Study arose from the States'

efforts to settle litigation the State of Alabama initiated against the Corps. The States memorialized their intent in a Memorandum of Agreement dated January 3, 1992, which was approved by the U.S. District Court for the Northern District of Alabama.

10. In 1997, following the completion of the Comprehensive Study, Congress passed the Apalachicola-Chattahoochee-Flint River Basin Compact, Pub. L. No. 105104, 111 Stat. 2219 (1997) ("ACF Compact"), which was subsequently ratified by all three States. The parties to the ACF Compact agreed to develop an allocation formula for equitably apportioning the waters of the ACF Basin among the States while "protecting the water quality, ecology, and biodiversity" of the Apalachicola Region. ACF Compact Art. VII(a). The ACF Compact recognized that, although upstream uses could continue to develop during the pendency of those negotiations, those uses would not become "permanent, vested or perpetual rights to the amounts of water used between January 3, 1992 and the date on which the [ACF Compact] Commission adopts an allocation formula." ACF Compact Art. VII(c). While the States could have resolved their differences through this ACF Compact process, Georgia's bad faith caused the negotiations to disintegrate, resulting in the demise of the ACF Compact in 2003.

11. Georgia took advantage of the time between initiation of the Comprehensive Study in 1992 and failure of the ACF Compact in 2003 to continually increase its consumptive uses. Since 1992, Georgia's

municipal, industrial, recreational, and agricultural uses of ACF Basin water have grown significantly, but under the terms of the Memorandum of Agreement and the ACF Compact, Georgia had no entitlement to any of these inflated uses. The pattern did not end after the ACF Compact failed, but has continued unabated, despite another decade of lower court litigation and failed judicial and non-judicial settlement efforts. Indeed, Florida has made numerous attempts to resolve this interstate dispute through formal and informal discussions, as well as court-sponsored mediation (including sessions facilitated by the U.S. Secretary of the Interior and the Council on Environmental Quality). *See, e.g.*, Joint Motion for Order Regarding Confidentiality of Settlement Negotiations, *In re Tri-State Water Rights Litig.*, (No. 315). All of these efforts ultimately failed.

12. Florida has exhausted all other reasonable means to arrest Georgia's unchecked use of water and halt the continuing degradation of the Apalachicola Region. Florida now, of necessity, invokes the Court's original jurisdiction seeking an appropriate apportionment to redress existing harm and to avert additional harmful depletions caused by uses in Georgia. There is no other forum in which Florida may vindicate its interests and obtain the requisite relief against Georgia.

13. Florida's action for an equitable apportionment includes all waters hydrologically connected to the Chattahoochee and Flint Rivers (including,

without limitation, groundwater, rivers, streams, creeks, draws, and drainages).

14. Alabama lies upstream of Florida within the ACF Basin. Although not opposed to Alabama's participation in this action, Florida asserts no wrongful act by Alabama and seeks no affirmative relief against Alabama. Therefore, Alabama is not named in this action. *Compare Nebraska v. Wyoming*, 295 U.S. 40 (1935).

15. Florida also seeks no affirmative relief against the United States in this action with respect to the Corps' operation of the federally authorized dam and reservoir system, or any other interest.

JURISDICTION

16. The Court has jurisdiction pursuant to Article III, Section 2, Clause 2 of the United States Constitution and 28 U.S.C. § 1251(a) (2011).

EQUITABLE APPORTIONMENT

The Apalachicola-Chattahoochee-Flint River Basin

17. The Chattahoochee River begins in the Blue Ridge Mountains in northeastern Georgia and flows through metropolitan Atlanta and to the southwest until it turns south and forms the border of Georgia and Alabama. The Chattahoochee River and its tributaries provide municipal and industrial water to a majority of the Atlanta metropolitan population

including Fulton, DeKalb, Gwinnett, Forsyth, Douglas and Cobb counties, as well as the city of Columbus. Most surface water intakes are located on the Chattahoochee River, its smaller tributaries, and Lake Lanier.

18. The Flint River rises in the metropolitan Atlanta area and flows generally southward through Albany and on to the Georgia-Florida border. The Flint River Basin is the source of water for hundreds of thousands of acres of irrigated land in southern Georgia, most of which is served by irrigation wells.

19. The southern half of the Flint River and some of its tributaries are hydrologically connected to the underlying Floridan Aquifer. In this region, groundwater discharge through the streambed, stream banks, and springs from the Floridan Aquifer contribute to the total flows of the river during years of normal precipitation. That percentage increases in years with below-normal precipitation.

20. At the Georgia-Florida border, the Flint River joins with the Chattahoochee River at the Jim Woodruff Lock and Dam ("Woodruff Dam") to form Lake Seminole. At Lake Seminole, the unified Chattahoochee and Flint Rivers become the Apalachicola River. The Apalachicola River lies entirely within the State of Florida and flows, unimpeded by any dam, southward across Florida's panhandle and feeds into the Apalachicola Bay at the Gulf of Mexico.

21. Water withdrawals from the Chattahoochee and Flint River Basins, either directly from the Chattahoochee and Flint Rivers and their tributaries or indirectly from hydrologically connected groundwater, reduce the amount of water flowing to the Apalachicola River at all times, but the effects are especially apparent during the low flow summer and fall periods. Therefore, water use in Georgia has a direct hydrologic impact on Florida.

22. The Corps operates five dams on the Chattahoochee River (in downstream order): Buford, West Point, Walter F. George, George W. Andrews and Woodruff. Woodruff also impounds water from the Flint River and marks the upstream end of the Apalachicola River. Although independent facilities, the Corps' dams are operated as a unified whole to achieve multiple project purposes.

23. Water storage and consumption in Georgia also affects how water is released to Florida from these federal reservoirs. The Corps determines how much water to release from its reservoirs based, in part, upon calculated inflows to the ACF Basin. Georgia's storage and consumption reduces those inflows. As a result, as Georgia's uses increase, the calculated inflows to the ACF Basin decline, and even less water is released from the Corps' reservoirs. The net result of Georgia's unmitigated water use is that less water reaches Florida due to both the hydrologic depletions and the Corps' operational protocols.

The Unique and Rich Ecology of the Apalachicola Region

24. Maintaining an ample flow of water from the Chattahoochee and Flint River Basins is critical to preserving the ecology of the Apalachicola Region. Georgia's current storage and consumption has already injured this precious resource.

25. The rich biodiversity of the Apalachicola Region in Florida is reflected in the presence of 142 freshwater and estuarine fish species (99 species in nontidal reaches and 43 species in tidal reaches of the River), 26 species of mussels (including 3 federally listed mussels and 4 candidate species proposed for federal listing), and over 1,600 species of plants (including 342 species in wetland forests of the River floodplain).

26. The Apalachicola River has the largest river floodplain forest in Florida and the greatest number of freshwater fish species in Florida. The Apalachicola Basin has the greatest herpetofaunal species richness in North America north of Mexico and is one of the most important areas in the United States for reptiles and amphibians (particularly anurans, salamanders, snakes, and turtles). Also, Ogeechee tupelo trees in the floodplain forest of the Apalachicola River are the principal source of commercially produced tupelo honey in the United States.

27. The Apalachicola Bay has been historically one of the most productive estuarine systems on the Gulf Coast. It is home to the congressionally created Apalachicola National Estuarine Research Reserve ("ANERR"), which encompasses 246,766 acres of land and water, making it the second largest of the 28 national estuarine research reserves. ANERR includes two barrier islands and part of a third, which includes the lower 20 miles of the Apalachicola River and its floodplain, adjoining uplands, and the Apalachicola Bay. ANERR received international recognition when it was designated as a Biosphere Reserve by the United Nations Educational, Scientific, and Cultural Organization.

28. The rich and complex ecosystem of the Apalachicola Region developed under the Chattahoochee and Flint Rivers' unimpaired, natural flow regime. This natural flow regime was responsible for the creation of river channel habitat, cyclical inundations of the floodplain, inter-connections of floodplain channels, maintenance of a suitable salinity regime in the Bay, and inputs of essential nutrients to the Bay.

29. The Apalachicola Region provides habitat for more than 100 species that the federal government and the State of Florida have designated as endangered, threatened, or species of concern. These species, and their federally protected habitats, depend upon the historical flow patterns of the Apalachicola River for their continued existence.

Threatened and endangered species also reside in the waters within the Georgia portion of the ACF Basin.

The Social and Economic Significance of the Apalachicola River and Bay

30. The environmental health of the Apalachicola Region directly affects the local economy and sociology. The local population of Franklin County and the surrounding region is highly dependent on the region's natural resources, which support both the regional economy and a unique way of life that has evolved around the seafood and coastal industries.

31. Freshwater inflows provide essential nutrients to the Bay that make it one of the most productive areas for fish and shellfish in the entire Gulf of Mexico. Freshwater inflows also reduce the Bay's salinity, which is essential to oysters and other commercially salable species, by limiting predation by marine species and disease.

32. Commercially salable species in the Bay include the Eastern Oyster, shrimp, blue crab, and several varieties of finfish. Until recently, the Bay produced about 12 percent of the nation's Eastern Oysters. Much of the oyster, shrimp and fish harvest is exported for consumption throughout the United States.

33. The species that inhabit the Apalachicola Region provide a wide range of economic benefits to the Region and to Florida. Similarly, the Apalachicola

Region supports significant tourism and recreation-based industries. Tourists and outdoor enthusiasts engage in recreation in, on, and around the River and Bay. Outdoor recreation in the Apalachicola Region includes a wide spectrum of activities, including kayaking, canoeing, mountain biking, horseback riding, hunting, fishing, ATV, and motorbike riding, backpacking, birding, and botanical study.

34. The resources within the Apalachicola Region also provide substantial economic benefits in the form of ecosystem services, *e.g.*, water filtration, waste assimilation, flood attenuation, and flood mitigation. All of these benefits accrue as a direct result of the ecosystem that is created from the flows of the Apalachicola River.

35. The region's economic and sociological interests cannot be replaced with other industries or mitigated through relocation. Indeed, if the seafood industry disappears in Apalachicola, one of the most storied working waterfronts in the State will be lost to history.

Efforts to Protect the Apalachicola River and Bay

36. Because of its value and importance to its citizenry, Florida has made a substantial commitment of public resources to protect the Apalachicola Region. The altered flow regime caused by Georgia has had, and continues to have, an adverse impact on Florida's preservation efforts, undermining Florida's extraordinary investments.

37. Florida has designated areas within the ANERR as Outstanding Florida Waters, and Apalachicola Bay as an Aquatic Preserve. Both designations provide heightened legal protections beyond those afforded other waters of the State.

38. In addition, Florida has funded many of the natural resource management programs for the Apalachicola River and Bay. These protective efforts include the purchase of more than 329,000 acres within the Apalachicola Region. Of that total, approximately one-third was purchased since January 1999, at a cost exceeding $120 million.

39. Florida continues to show a high level of commitment to Apalachicola preservation. This year's State budget included nearly $5 million for water quality restoration projects in the Apalachicola Bay estuary and for oyster shelling and research to help industry recovery.

40. In 2006, the Northwest Florida Water Management District, the State body responsible for water management in the Apalachicola River Basin, adopted rules that effectively preclude any further consumptive withdrawals of surface water from the Apalachicola River, the Chipola River, and the Chipola Cutoff. This extraordinary measure was undertaken expressly to protect the ecosystem of the Apalachicola Region.

41. Total land area within the Apalachicola River Basin acquired for conservation purposes by

local, State, federal, and private actors exceeds an area 12 times larger than the District of Columbia.

The State of Georgia's Increasing Consumption of Water and its Adverse Impact on the Apalachicola River Basin and Bay

42. Georgia's water storage and consumption upstream of the Apalachicola River in the Chattahoochee and Flint River Basins has reduced Apalachicola River flows entering Florida. This reduction has damaged numerous species and habitats in the Apalachicola Region's ecosystem, and the overall economic, environmental, and social health and viability of the region.

43. Georgia's storage and consumption causes significant economic injury to Florida. The River and Bay ecosystems provide important services to Florida's economy, and when these ecosystems are disrupted, these valuable services are placed at risk. The recent collapse of the oyster fishery in Apalachicola Bay is one example of the connection between the River and Bay ecosystems and the economy of the State.

44. Long-term climatic data has not shown significant changes in precipitation. However, the amount of discharge to the rivers and streams of the ACF Basin generated by precipitation events has diminished over time. Changing climatic conditions cannot, therefore, explain reductions in inflows to the Apalachicola River.

45. The primary uses of water in the Chattahoochee River Basin are municipal and industrial. The metro-Atlanta region presently withdraws and uses 360 million gallons per day ("mgd") in the upper Chattahoochee River. App. 6. Georgia expects its demands to nearly double from present levels and by 2040, expects to withdraw 705 mgd. App. 7.

46. The primary uses of water in the Flint River Basin are agricultural. Georgia has authorized agricultural users to withdraw and consume water from the Flint River Basin for irrigation purposes. These users irrigate approximately 563,000 acres (879 square miles). Annual withdrawals vary considerably depending on the summertime precipitation patterns but withdrawals typically increase during drought periods. In addition to this existing irrigation, Georgia has granted applications to irrigate additional acreage in the Flint River Basin. These granted applications, when combined with existing irrigation, total 843,000 acres (1,317 square miles), an area larger than the State of Rhode Island. Georgia also has numerous additional applications pending approval. A map prepared by the State of Georgia illustrating the location and density of agricultural wells in the Chattahoochee River and Flint River Basins is provided at App. 2.

47. In the Flint River Basin, agricultural irrigation represents the largest volume of water use. Of the total number of irrigated acres (563,000), approximately 160,000 acres are irrigated by diverting water directly from streams throughout the Basin.

The irrigation corresponds with the hottest and driest times of the year when evapotranspiration through crops is highest. Irrigation diversions from surface and groundwater sources cause streams and groundwater levels, which are naturally approaching their seasonally lowest levels, to decline even further.

48. Approximately 120 mgd are withdrawn from the Flint River Basin for municipal and industrial use.

49. Over 20,000 non-federal water impoundments of various sizes have been constructed in the ACF Basin in Georgia. These impoundments intercept flow which would otherwise discharge to the ACF river system. The cumulative impact of these impoundments is significant, particularly during dry periods. The beneficial effects to the Apalachicola River from rainfall events during dry periods are either attenuated or completely eliminated when the impoundments intercept flow. Much of this impounded water never arrives downstream because of increased evaporative losses and agricultural withdrawals. These impoundments continue to be constructed in the Georgia portion of the ACF Basin.

50. The existing storage, evaporation, and consumption of water by Georgia's municipal, industrial, recreational, and agricultural users have diminished the amount of water entering Florida in spring and summer of drought years by as much as 3,000-4,000 cubic feet per second ("cfs"). This has altered the flow regime of the Apalachicola River during the

most vulnerable times for riverine and estuarine species. In recent drought years, Apalachicola River flows averaged less than 5,500 cfs throughout the entire late-spring-summer-fall period from May through December. Such long durations of extremely low flows were unprecedented before 2000.

51. As recognized by federal and state agencies, including the U.S. Geological Survey, well pumping in Georgia's Flint River Basin directly affects the amount of water flowing in the Flint River and, thus, into Florida's Apalachicola Basin. *Stream-Aquifer Relations and the Potentiometric Surface of the Upper Floridan Aquifer in the Lower Apalachicola-Chattahoochee-Flint River Basin in part of Georgia, Florida, and Alabama* (USGS 2002).

52. As recognized by the U.S. Geological Survey, water level declines have caused substantial changes in the floodplain habitats throughout the Apalachicola River. *Water-Level Decline in the Apalachicola River, Florida, from 1954 to 2002, and Effects on Floodplain Habitats* (USGS 2006).

53. As recognized by the U.S. Fish and Wildlife Service, upstream consumption is affecting threatened and endangered species and habitats along the Apalachicola River. *See Biological Opinion on the U.S. Army Corps of Engineers, Mobile District, Revised Interim Operating Plan for Jim Woodruff Dam and the Associated Releases to the Apalachicola River* (USFWS 2012).

54. As a result of actions authorized by Georgia, Florida has already suffered harm of a serious magnitude to the Apalachicola Region's ecosystem and equities that arise from that ecosystem. Reduced freshwater inflows to the Apalachicola Bay over the past several years precipitated a collapse of the Apalachicola Bay oyster fishery, resulting in significant economic hardship to oystermen and others dependent upon oyster harvests.

55. In 2012, Florida experienced the lowest average annual flow of the Apalachicola River in the 90-year period of record at the U.S. Geological Survey stream gage at Chattahoochee, Florida (immediately below Woodruff Dam). The average annual flow in 2012 was 65 percent lower than the average annual flow for 1923-2012. This record low flow year followed the fourth-lowest flow on record in 2011, resulting in an exceptionally low two-year period that was extremely harmful to species and habitats throughout the Apalachicola Region.

56. The resulting low flows reduced available habitats in the Apalachicola River and thrust salinity levels in Apalachicola Bay above tolerable levels. Apalachicola Bay winter season oyster landings for 2012-2013 were 62.3 percent lower than the previous five year average and were the lowest ever recorded in Apalachicola Bay by the Florida Marine Fisheries Information System. Diminished harvest continues into the 2013-2014 winter season. As a result, the

surrounding economy experienced a severe contraction and led Florida Governor Rick Scott to seek a declaration of a commercial fisheries failure for the oyster industry from the U.S. Department of Commerce, which was granted in August 2013.

57. Georgia's continued and increasing use of water will further harm Floridians who rely upon the Apalachicola Bay. If inflows from the Apalachicola River continue to be reduced, the productivity of the Bay will be irreparably harmed.

58. Adverse impacts are equally acute on the Apalachicola River. Since 2006, thousands of threatened and endangered mussels have died as a result of low summer flows, the threatened Gulf sturgeon's spawning habitat has been rendered inaccessible, and habitat for freshwater fish spawning and recruitment, along with floodplain habitats, have been adversely affected.

59. As Georgia's water uses grow, the amount of water entering Florida will continue to decrease, essential fish and wildlife habitats will constrict, and Florida will suffer additional irreparable harm. As Georgia's upstream storage and consumption grows over time, low flow events will become more frequent and increase in severity, diminishing the likelihood that key species will survive and precluding any chance of recovery over the long term.

60. The situation is dire and the need for relief immediate. Florida has a right to its equitable share of the waters that have flowed historically to it from the Chattahoochee and Flint Rivers. Florida cannot and should not suffer injury in order to satiate Georgia's unrelenting thirst.

PRAYER FOR RELIEF

Florida prays that the Court require Georgia to answer Florida's complaint, appoint a special master, and after due proceedings, enter a decree equitably apportioning the waters of the ACF Basin.

Florida further prays that the Court enter an order enjoining Georgia, its privies, assigns, lessees, and other persons claiming under it, from interfering with Florida's rights, and capping Georgia's overall depletive water uses at the level then existing on January 3, 1992.

Florida also prays that the Court award Florida any other relief that the Court may deem just and appropriate.

Respectfully submitted,

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No. _____, Original

In The Supreme Court of the United States

STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

BRIEF IN SUPPORT OF MOTION FOR LEAVE TO FILE A COMPLAINT

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BRIEF IN SUPPORT OF MOTION FOR LEAVE TO FILE A COMPLAINT

The State of Florida submits this brief in support of its Motion for Leave to File a Complaint.

STATEMENT OF JURISDICTION

The Court has jurisdiction pursuant to Article III, § 2, cl. 2 of the United States Constitution and 28 U.S.C. § 1251(a).

INTRODUCTION

"A river," as Justice Holmes once observed, "is more than an amenity, it is a treasure." *New Jersey v. New York*, 283 U.S. 336, 342 (1931). Florida's Apalachicola River and Bay (the "Apalachicola Region") is likewise a treasure – a unique and vibrant cultural, social and economic community. Settlers established the port City of Apalachicola in the early nineteenth century. The economy and way of life those early settlers created has flourished for generations and has always depended on the environmental health of the River and Bay.

Today, however, the community, ecology, and economy of the Apalachicola Region, which have already suffered harm of a serious magnitude, are at grave risk of future harm because upstream diversions are reducing freshwater inflows. The State of Georgia is storing and consuming the waters of the

Apalachicola-Chattahoochee-Flint River Basin ("ACF Basin") and threatening the Apalachicola Region with devastation. Large, and ever-increasing, amounts of water (taken both as surface water and the hydrologically connected groundwater) are withdrawn and impounded for municipal, industrial, recreational, and agricultural uses permitted by Georgia. Left unchecked, Georgia's current and projected use of water threatens a biological and economic collapse of the Apalachicola Region. Florida, therefore, calls upon this Court to arrest Georgia's unchecked storage and consumption of water, which has despoiled the fragile ecosystem upon which the Apalachicola Region's social, cultural, and economic structures are founded.[1]

The adjudication of Florida's claim against Georgia for equitable apportionment of the waters of the ACF Basin falls squarely within the Court's original jurisdiction over controversies between two sovereign states. First, there is an actual, existing, and ongoing dispute over how these interstate waters are to be apportioned. Next, Georgia's actions have caused, and if not remedied will further cause, direct, immediate, and irreparable injury to Florida.

Finally, there is no other forum available to resolve the issues presented. Prior lower court litigation,

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[1] Alabama lies upstream of Florida within the ACF Basin. Although not opposed to Alabama's participation in this action, Florida asserts no wrongful act by Alabama and seeks no affirmative relief against Alabama. Therefore, Alabama is not named in this action. *Compare Nebraska v. Wyoming*, 295 U.S. 40 (1935).

directed at federal reservoir operations, did not, and could not, fully address the injury caused by Georgia's actions.[2] All non-judicial efforts, including negotiations pursuant to a now failed interstate compact, negotiations surrounding the lower court disputes, and other negotiations between the respective States' Governors over the past twenty years, have proven unsuccessful. The exercise of original jurisdiction by this Court represents the only available means to apportion equitably the waters of the ACF Basin and resolve long-standing conflicts between the States.

STATEMENT OF THE CASE

Florida seeks an equitable apportionment of the waters of the ACF Basin and appropriate injunctive relief against Georgia to sustain an adequate flow of fresh water into the Apalachicola Region.

I. THE WATERS OF THE ACF BASIN.

The flow of the Apalachicola River at the Georgia-Florida border (and hence the principal freshwater inflow into the Apalachicola Region) is created by the combined inflows of the Chattahoochee and Flint Rivers, their tributaries and hydrologically connected

[2] The subject matter of that litigation involved the Corps' legal authority to support water supply demands from Lake Lanier (Buford Dam) in Georgia. The litigation did not seek to limit Georgia's withdrawals of water from the ACF Basin.

groundwater. App. 1. Water enters the Apalachicola River from the Chattahoochee and Flint River Basins with a combined drainage area of approximately 17,000 square miles in Georgia and Alabama. The Chattahoochee River Basin comprises 8,770 square miles, while the Flint River Basin comprises 8,460 square miles.

The Chattahoochee River begins in the Blue Ridge Mountains in northeastern Georgia and flows through metropolitan Atlanta, near the headwaters of the Flint River. From Atlanta, the Chattahoochee River flows southwest for approximately 75 miles and then turns south and forms the border between the States of Georgia and Alabama.

The U.S. Army Corps of Engineers ("Corps") owns and operates five major dams on the Chattahoochee River: Buford, West Point, Walter F. George, George W. Andrews, and Jim Woodruff Lock and Dam ("Woodruff Dam"). The reservoirs impounded by the dams (Lakes Lanier, West Point, George, Eufaula, and Seminole, respectively) have a combined conservation storage capacity of about 1.6 million acre-feet. The facilities are operated as a unit to support various purposes including flood control, hydroelectric power generation, navigation, recreation, water supply, water quality, and fish and wildlife conservation. The City of Atlanta and the surrounding metropolitan area take water directly from and below the largest of these facilities, Buford Dam, which was authorized by the 1945 and 1946 River and Harbor Acts.

Other smaller cities like Columbus also withdraw water from the Chattahoochee.

The headwaters of the Flint River are in the metropolitan Atlanta area. From there, the Flint River flows generally southward through the City of Albany, Georgia and on south where it joins with the Chattahoochee River at Woodruff Dam near the Georgia-Florida border.

At Lake Seminole, the united Flint and Chattahoochee Rivers become the Apalachicola River. The Apalachicola River flows southward unimpeded across Florida's panhandle and into the Apalachicola Bay in the Gulf of Mexico. The Apalachicola River remains one of the last undammed rivers in the southeast United States.

Over many centuries, the annual and seasonal flow variability of the Apalachicola River has created a unique ecological setting. A rich and varied number of species in the Apalachicola Region flourish and reproduce based upon the habitat created, and nutrients transported, by the Apalachicola River's natural flow regime. The ecosystems created by the Apalachicola River have been recognized by both the United States and the State of Florida as having immense natural, social, and cultural value. For instance, the Apalachicola National Estuarine Research Reserve ("ANERR") is one of only 28 such reserves designated by the National Oceanic and Atmospheric Administration ("NOAA").

The Apalachicola Bay is one of the most productive estuarine systems in the Gulf of Mexico. Until recently, the Bay has produced 12 percent of the nation's harvest of Eastern Oysters. The Bay also supports an active shrimp, crab, and finfish industry, and serves as an important nursery area for many marine species. These, and other species, rely on the quantity, quality, and pattern of flows entering Florida, and altering that flow regime during certain times of the year can have significant adverse consequences to the productivity of the Apalachicola River and Apalachicola Bay. App. 32-33; 37-38.

These ecosystems fuel a vibrant economy and way of life in the Apalachicola Region. The Apalachicola Region supports a commercial fishery, innumerable recreational opportunities, and passive use values, like flood attenuation and water quality improvement. Moreover, generations of inhabitants have lived, worked, and prospered in this unique and culturally rich community. Florida seeks to protect all these diverse, irreplaceable, and varied interests.

II. GEORGIA'S UPSTREAM STORAGE AND CONSUMPTION HARM FLORIDA.

Georgia presently withdraws approximately 360 million gallons of water per day ("mgd") from the Chattahoochee River for municipal and industrial uses. Municipal uses include not only drinking water supplies but also such uses as car washing and lawn watering, among the major municipal consumptive

uses. Industrial uses include paper mills, recreational water parks, and golf courses. Substantial municipal and industrial uses in the metropolitan Atlanta area are extenuated by extraordinary losses in transmission, with so-called "lost or unaccounted for" water exceeding national standards. Georgia anticipates increasing its municipal and industrial withdrawals to 705 mgd by 2040. App. 7. Peak withdrawals, associated with watering lawns, car washing, golf courses, and parks, come when inflow needs are most critical to Florida – the dry summer months. Conservation efforts in Georgia have been minimal, even though it is the most cost-effective and readily available way to meet Georgia's growing demands.

Georgia also allows irrigators to withdraw water directly from the Flint River and its tributaries, as well as from groundwater that is hydrologically connected to those surface waters. These withdrawals are virtually unregulated in amount and duration, and only recently have been subjected to basic data collection and monitoring. According to official Georgia sources, Georgia presently allows 879 square miles to be irrigated with Flint River water. In addition, Georgia has already authorized an increase to its total irrigated lands in the Flint River Basin to more than 1,317 square miles – an area greater than the State of Rhode Island and roughly half the size of the entire Apalachicola Region. Georgia predicts that market trends will encourage farmers in southwest Georgia to increase the production of crop types, such as vegetables, that require the use of more irrigation

per acre than the principal crops (cotton, corn, and peanuts) currently grown in this area. Nevertheless, the marginal value of irrigation water in this region is minimal in most years given the already substantial rainfall the region receives.

In addition to these municipal, industrial, and agricultural uses, Georgia has authorized the construction of over 20,000 impoundments that intercept water and prevent it from reaching the Chattahoochee and Flint Rivers. These impoundments are often constructed on tributaries for recreational purposes such as boating, fishing, and wildlife. These impoundments directly reduce the flows ultimately entering the Apalachicola River by intercepting runoff water from precipitation in Georgia. Collectively, the effect of these impoundments can be substantial, with the flow reductions to the Apalachicola being most acutely felt during critical dry periods. *See Colorado v. Kansas*, 320 U.S. 383, 396-97 (1943) ("The 'critical matter' is when water is most needed"). Even so, Georgia continues to permit the construction of such impoundments.

Water storage and consumption in Georgia also affects how water is released to Florida from federal reservoirs on the Chattahoochee River. The Corps determines how much water to release from its reservoirs based, in part, upon calculated inflows to the ACF Basin. Georgia's storage and consumption reduces those inflows. As a result, as Georgia's uses increase, the calculated inflows to the ACF Basin decline, and even less water is released from the

Corps' reservoirs. The net result of Georgia's unmitigated water use is that less water reaches Florida due to both the hydrologic depletions and the Corps' operational protocols.

As developed further herein, the reduction in inflows as a result of this massive and unchecked storage and consumption in Georgia has already resulted in direct and irreparable harm to Florida. Oyster harvests have declined at a stunning rate and the Apalachicola Region has suffered a reduction in commercial fishery production, and a corresponding loss of jobs. Indeed, the oyster industry in Apalachicola Bay is now threatened with extinction. Commercial species harvested from the Apalachicola River and Bay provide the basis for jobs on the water and at processing facilities. There is also extensive recreational use of the Apalachicola River and Bay by residents of Florida and Georgia. Tourism and recreation-based industries rely directly upon the health of the River and Bay ecosystems – which are, in turn, reliant upon the amount and timing of fresh water entering the Apalachicola River from Georgia. Florida's economic interests in this apportionment are therefore profound.

Moreover, the full value of the Apalachicola Region lies not just in the monetary value of the economic interests. Indeed, a unique and rich community has evolved around the seafood and coastal industries in and around Franklin County. These socio-cultural interests cannot be replaced with other industries or mitigated through relocation. At stake,

therefore, is a way of life that has existed and prospered for generations. The very character and culture of the Apalachicola Region will be forever lost absent intervention by this Court.

III. ADJUDICATION OF FLORIDA'S CLAIM IS AN APPROPRIATE EXERCISE OF THIS COURT'S ORIGINAL AND EXCLUSIVE JURISDICTION.

This original action involves a dispute between two States over their respective rights to the flow of an interstate river system. The Court has original and exclusive jurisdiction over all controversies between such parties. *See* U.S. Const. art. III, § 2, cl. 2; 28 U.S.C. § 1251(a) (2011). *See also Mississippi v. Louisiana*, 506 U.S. 73, 77-78 (1992).

Although the Court exercises its original jurisdiction sparingly, the Court often has done so to resolve an intractable dispute with another State over rights pertaining to rivers or other bodies of water. Such cases are governed by federal common law and the doctrine of equitable apportionment. *See Colorado v. New Mexico*, 459 U.S. 176, 183 (1982) ("Equitable apportionment is the doctrine of federal common law that governs disputes between states concerning their rights to use the water of an interstate stream."); *see also Virginia v. Maryland*, 540 U.S. 56, 74 n.9 (2003) ("Federal common law governs interstate bodies of water, ensuring that the water is equitably apportioned between the States and that neither State

harms the other's interest in the river."). This Court crafted the doctrine of equitable apportionment to resolve disputes such as this one. *See Arizona v. California*, 373 U.S. 546, 597 (1963) ("The doctrine of equitable apportionment is a method of resolving water disputes between States. It was created by this Court in the exercise of its original jurisdiction over controversies in which States are parties.").

As the Court recognized more than a century ago, when "the action of one State reaches, through the agency of natural laws, into the territory of another State, the question of the extent and limitations of the rights of the two states becomes a matter of justiciable dispute between them." *Kansas v. Colorado*, 206 U.S. 46, 97-98 (1907).

Florida's claim against Georgia for equitable apportionment of the ACF Basin waters represents the kind of claim this Court has often used its original jurisdiction to resolve. *See Texas v. New Mexico*, 462 U.S. 554, 567 (1983) ("There is no doubt that this Court's jurisdiction to resolve controversies between two States extends to a properly framed suit to apportion the waters of an interstate stream between States through which it flows."); *Illinois v. City of Milwaukee*, 406 U.S. 91, 106 (1972) ("Equitable apportionment of the waters of an interstate stream has often been made under the head of our original jurisdiction."). Indeed, this Court has recognized its "serious responsibility to adjudicate cases where there are actual existing controversies over how interstate streams should be apportioned among

States." *Arizona v. California*, 373 U.S. at 564. What the Court observed in that case is no less true here:

> Unless many of the issues presented here are adjudicated, the conflicting claims of the parties will continue, as they do now, to raise serious doubts as to the extent of each State's right to appropriate water from the [river system at issue] for existing or new uses. In this situation, we should and do exercise our jurisdiction.

Id. See also Idaho v. Oregon, 462 U.S. 1017, 1031 n.1 (1983) (O'Connor, J., dissenting) (noting that "disputes over the waters of interstate streams" are "particularly appropriate for resolution by this Court in the exercise of its original jurisdiction").

For example, in *New Jersey v. New York*, 283 U.S. 336 (1931), New Jersey sought to enjoin New York State and New York City from executing a proposed diversion of water from the Delaware River and its tributaries. In support of its requested injunction, New Jersey "allege[d] that the proposed diversion will transgress its rights in many respects." *Id.* at 343. New Jersey contended, among other things, that the proposed diversion "will increase the salinity of the lower part of the River and of Delaware Bay to the injury of the oyster industry there," "will injure the shad fisheries," and "will injuriously affect the River for recreational purposes." *Id.* at 343-44. The Court appointed a Special Master who, after receiving "a great mass of evidence," found that the taking of 600 million gallons of water per day would "not materially

affect" the shad fisheries but that the effect of such withdrawals on the oyster fisheries and recreational uses would be "somewhat more serious." *Id.* at 343, 345. The Court confirmed the Master's finding that "[t]he total is found to be greater than New Jersey ought to bear, but the damage can be removed by reducing the draft of New York to 440 million gallons daily." *Id.* at 345.

The Court in *New Jersey v. New York* accordingly issued an injunction "to restrain the said State and City from diverting water in excess of that amount" (*i.e.*, 440 million gallons per day). *Id.* at 346. The Court's injunction also required the release of additional water in the event that the volume of flowing water fell below a certain point. It provided that, if at any time the flow of the Delaware River at Port Jervis, New York or Trenton, New Jersey fell below 1535 cfs, "water shall be released from one or more of the impounding reservoirs of New York City in sufficient volume to restore the flow at Port Jervis and Trenton." *Id.*

Likewise, Florida seeks injunctive relief to restrain Georgia from the inequitable diversion of waters from the ACF Basin. The long-running conflict between Florida and Georgia "has precipitated a clash of interests which between sovereign powers could be traditionally settled only by diplomacy or war. The original jurisdiction of this Court is one of the alternative methods provided by the Framers of our Constitution." *Nebraska v. Wyoming*, 325 U.S. 589, 608 (1945). Therefore, the history of this dispute

demonstrates the exercise of this Court's original jurisdiction is both appropriate and necessary.

A. Florida Presents A Strong Claim For Relief.

Florida has an undeniable right to an equitable share of waters that have historically flowed to it from the Chattahoochee and Flint Rivers. This Court's precedent makes clear Georgia may not store and consume the waters of the Chattahoochee and Flint Rivers in unlimited quantity heedless of the impact on the Apalachicola Region, Florida, and her citizens. A State simply "cannot divert all of the water it may need or can use simply because the river's headwaters lie within its borders." *Colorado v. New Mexico*, 459 U.S. at 191 (Burger, C.J., concurring) (citing *Wyoming v. Colorado*, 259 U.S. 419, 466 (1922)). *See also Idaho v. Oregon*, 462 U.S. 1017, 1025 (1983) ("[A] State may not preserve solely for its own inhabitants natural resources located within its borders.").

On the contrary, where, as here, a stream runs from one State to another, "the upper state on such a stream does not have such ownership or control of the waters flowing therein as entitles her to divert and use them regardless of any injury or prejudice to the rights of the lower state in the stream." *Wyoming v. Colorado*, 259 U.S. at 464. Thus, when it comes to the flow of water from the upper portions of the ACF Basin, Florida "has an equitable right to a fair distribution of this important resource." *Idaho v. Oregon*,

462 U.S. at 1025. Respecting Florida's rights to the flow of the Chattahoochee and Flint Rivers may leave Georgia with less water than it would like, but "States have an affirmative duty under the doctrine of equitable apportionment to take reasonable steps to conserve and even to augment the natural resources within their borders for the benefit of other States." *Idaho v. Oregon*, 462 U.S. at 1025. *See also Colorado v. New Mexico*, 459 U.S. at 185.

To obtain a decree from this Court equitably apportioning an interstate waterway, a State, after due proceedings, must demonstrate "some real and substantial injury or damage" or a "substantial likelihood of injury." *Idaho v. Oregon*, 462 U.S. at 1027, 1029. Florida alleges, and will establish, Georgia has caused, and left unchecked will continue to cause, direct, immediate and irreparable injury.

The federal government has recognized the ecological importance of the Apalachicola Region. As the U.S. Geological Survey stated in a recent report:

> The Apalachicola River is in one of the Nation's biodiversity hotspots, as recognized by the Nature Conservancy. More than 70 different species of trees grow in the Apalachicola River floodplain, which is the largest forested floodplain in Florida. . . . The ACF Basin has the highest species density of amphibians and reptiles on the continent north of Mexico, and the largest diversity of fish fauna among the Gulf Coast river drainages east of the Mississippi River. Sixteen fish

> species have been listed for protection by Federal or State agencies.

UNITED STATES GEOLOGICAL SURVEY, WATER-LEVEL DECLINE IN THE APALACHICOLA RIVER, FLORIDA, FROM 1954 TO 2004, AND EFFECTS ON FLOODPLAIN HABITATS, SCIENTIFIC INVESTIGATIONS REPORT 2006-5173, at 7 (2006) (citations omitted) ("USGS 2006 Report").

Among the species that inhabit the Apalachicola Region are several that are threatened or endangered. *See, e.g., Alabama v. U.S. Army Corps of Eng'rs*, 441 F. Supp. 2d 1123, 1125 (N.D. Ala. 2006) (noting that "[f]our federally-listed threatened and endangered species are present in the Apalachicola River downstream from Woodruff Dam: the threatened Gulf sturgeon, the threatened fat threeridge mussel, the endangered purple bankclimber mussel, and the threatened Chipola slabshell mussel.") (footnotes omitted).

Georgia's existing and projected uses of water in the Chattahoochee River Basin are catalogued in materials submitted to the Corps by Georgia's Governor Nathan Deal. Those materials include a sworn affidavit from the Director of the Georgia Environmental Protection Division, Judson H. Turner, stating that in 2011, Georgia users diverted 360.9 million gallons per day. App. 6. Mr. Turner explained that Georgia's water diversion from the Chattahoochee River, "will equal or exceed 705 mgd by 2040, if not a few years sooner." App. 7. *See Idaho v. Oregon*, 462 U.S. at 1026 ("Reliance on reasonable predictions

of future conditions is necessary to protect the equitable rights of a State."). In addition to these municipal and industrial uses, Georgia also has constructed and continues to allow the construction of numerous small reservoirs throughout the Chattahoochee River Basin. Cumulatively, these reservoirs impound runoff water that would otherwise flow into the Chattahoochee River and down to Florida

Georgia also uses an enormous amount of water from the Flint River Basin. Telling facts and statistics are supplied by Georgia itself in a state government report. *See* GEORGIA DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION DIVISION, FLINT RIVER BASIN REGIONAL DEVELOPMENT AND CONSERVATION PLAN (2006) ("FLINT RIVER BASIN PLAN"), available online at www1.gadnr.org/frbp/Assets/Documents/Plan22.pdf. Most of the water used in the Flint River Basin is used for the purpose of agricultural irrigation. *Id.* at 37 ("Water use in the Flint River Basin (FRB) is dominated by agricultural irrigation."); *id.* at 14 ("agricultural irrigation uses the largest volume of water in the FRB"). Nearly 40 percent of the harvested cropland in the Flint River Basin is irrigated. *Id.* at 151. "Overall, a total of approximately 160,000 acres are irrigated from surface-water throughout the Flint River Basin and approximately 403,000 acres from Floridan aquifer wells in Subarea 4." *Id.* at 15. "Not coincidentally, this [irrigation] corresponds with the hottest and/or driest parts of the year when evapotranspiration is highest, and streams and ground-water levels are approaching their seasonally

lowest levels." *Id.* at 21, 88. *Id.* at 21 ("[I]rrigation usage typically reaches a maximum in June, July, or August."). Cotton, peanuts, and corn account for 76 percent of irrigated acres in the Flint River Basin. *See id.* at 80. "However, changing market trends are favoring an increase in vegetable and green industry production that require more water per acre than the more common crops." *Id.* at 44.

Georgia's use of water from the Flint River Basin for irrigation purposes has an impact on the amount of water flowing in the Flint River and on to the Apalachicola River. *See id.* at 15 ("These withdrawals reduce streamflow, and can degrade aquatic habitat in the lower FRB."); *id.* at 22 ("Since extensive development of irrigation in the lower Flint River Basin, drought-year low flows are reached sooner and are lower than before irrigation became widespread."); *id.* (recognizing "the clear[] evidence that agricultural irrigation compounds the effect of climatic drought on stream flow in the Basin"). The federal government has reached the same conclusion. *See* USGS 2006 REPORT at 43 ("Several studies have documented a strong connection between ground-water withdrawals [for irrigation] and reduced streamflow in the lower Flint River basin."); FWS OPINION at 86 ("Water use in Alabama and Georgia affects basin inflow to Woodruff Dam.").

Florida's experts have concluded Georgia's storage and consumption of water from the Chattahoochee and Flint Rivers has already caused harm of a

serious magnitude to Florida's interests. Professor J. David Allan explains:

> Ecosystems of the Apalachicola River have already suffered harm of a serious magnitude as a result of deviations in the natural flow regime. The construction of upstream dams, land use practices, and withdrawals of water, such as for irrigation in Georgia, have altered the natural flow regime of the Apalachicola River. Alteration of the natural flow regime has harmed at least three species, now federally listed as threatened or endangered under the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531 *et seq*. Stresses associated with artificially diminished flows and river stage have negatively affected other aspects of aquatic habitat in the Apalachicola Basin, especially those that occur during low flow periods during spring, summer and fall.

App. 32-33.

In 2012, Florida experienced the lowest average annual flow of the Apalachicola River in the 90-year period of record at the U.S. Geological Survey stream gage at Chattahoochee, Florida (immediately below Woodruff Dam). The average annual flow in 2012 was 65 percent lower than the average annual flow for 1923-2012. This record low flow year followed the fourth lowest flow on record in 2011, resulting in an exceptionally low two-year period that was extremely harmful to species and habitats throughout the Apalachicola River, floodplain, and Bay. The low flows reduced available habitats in the Apalachicola River

and thrust salinity levels in Apalachicola Bay above tolerable levels. Oyster landings in 2012 were the lowest in the last 20 years in Apalachicola Bay. The surrounding economy suffered severe contraction which continued into 2013. This situation resulted in the U.S. Department of Commerce declaring a commercial fishery failure due to fishery resource disaster under Section 312 of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and Section 308(b) of the Interjurisdictional Fisheries Act (IFA).

Moreover, further depletions will result in additional severe and irreparable harm to the ecology and economy of the downstream Apalachicola Region. As Professor Paul Montagna explains:

> Flows to the Apalachicola River will be further depleted by anticipated future upstream consumption. When this occurs, the frequency, duration and intensity of already extant adverse impacts will increase in Apalachicola Bay. Reduced river flows will further reduce the amount of nutrients and sediments flowing into the Apalachicola Bay and create even higher salinity levels. Reduced nutrient inputs and higher salinity levels will reduce estuarine productivity, alter the historical community structure of the bay, and will prove harmful to all estuarine dependent species, but particularly those fixed to the bottom, such as oysters. As a result, oyster production will continue to decline to the point of extirpation.

App. 38.

The harms Florida alleges – including harm to wildlife, habitat, threatened and endangered species, commercial operations, and recreational activities – are the same sorts of harms that other States have raised in equitable apportionment litigation. In *Nebraska v. Wyoming*, 515 U.S. 1 (1995), Nebraska sought to modify a 1945 decree equitably apportioning the North Platte River so as to enjoin certain water projects proposed by Wyoming that would deplete the river's flow and thereby harm endangered species. Wyoming objected to the Special Master's decision to allow Nebraska to present "evidence of injury not only to downstream irrigators, but also to wildlife and wildlife habitat." 515 U.S. at 12. But this Court overruled the objection, explaining that "we do not understand how we can preclude [Nebraska] from setting forth that evidence of environmental injury, or consign it to producing that evidence in some other forum, since this is the only Court in which Nebraska can challenge the Wyoming projects." *Id.* at 12-13. *See also Idaho v. Oregon*, 462 U.S. 1017 (1983) (suit for equitable apportionment of Chinook salmon and steelhead trout in the Columbia-Snake River system); *New Jersey v. New York*, 283 U.S. at 343 (enjoining New York's proposed diversion of Delaware River water above a certain amount due to effect on New Jersey's oyster industry and recreational uses of the river).

The situation is dire and the need for relief immediate. This action, therefore, seeks to arrest ongoing harm and to prevent future harm. *See Idaho*

v. Oregon, 462 U.S. at 1028 ("Equitable apportionment is directed at ameliorating present harm *and preventing future injuries to the complaining States*") (emphasis added). *See also Nebraska v. Wyoming*, 325 U.S. at 599 (noting that Nebraska based its case in part on "threats of more serious shortage and diversions in the future").

B. The Dispute Is Intractable.

In deciding whether a case is appropriate for the Court's original jurisdiction, the Court looks to "the availability of an alternative forum in which the issue tendered can be resolved." *Mississippi v. Louisiana*, 506 U.S. 73, 77 (1992). Moreover, while confirming its jurisdiction over suits between States over water rights, the Court has commented that "litigation of such disputes is obviously a poor alternative to negotiation between the interested States." *Texas v. New Mexico*, 462 U.S. at 567 n.13. In this case, neither litigation in alternate forums nor negotiation between the interested States offer any path to resolution. Prior litigation could never address the fundamental problem of Georgia's unrelenting storage and consumption. Prior negotiations, although extensive and spanning the more than two decades immediately preceding this filing, have failed. This intractable dispute is now presented to this Court, the only forum authorized and able to equitably apportion the waters.

From 1990 through 2012, operation of the Corps reservoirs, and in particular the operation of Buford Dam, which creates Lake Sidney Lanier, was the focus of intense, multi-state, and multi-jurisdiction litigation culminating in two decisions of the Circuit Courts of Appeals. *Se. Fed. Power Customers, Inc. v. Geren*, 514 F.3d 1316 (D.C. Cir. 2008); *In re MDL-1824 Tri-State Water Rights Litig.*, 644 F.3d 1160 (11th Cir. 2011). Due to the jurisdictional limits of the lower courts, the prior litigation could not address the fundamental issue Florida seeks to resolve in this Court: upstream storage and consumption in Georgia and resulting depletions to the Apalachicola Region.

The questions presented in the lower court litigation related to the Corps' legal obligations under various federal statutes (including the ESA, the Flood Control Act of 1944, the NEPA, the Rivers and Harbors Act of 1899, and the Water Supply Act of 1958) with respect to the Corps' operation of dams along the Chattahoochee River. Thus, the lower court litigation concerned the statutory duties of the Corps rather than the federal common law rights of the three States with respect to their equitable share of the waters of the ACF Basin. *See Alabama v. U.S. Army Corps of Eng'rs*, 424 F.3d at 1130 ("Contrary to Georgia's assertion, Alabama and Florida are not attempting to litigate their right to a certain amount of the water in the ACF basin. Rather, Alabama and Florida seek to ensure the Corps' compliance with federal law governing the management of projects in the ACF Basin, particularly Lake Lanier."). Nor did the lower

court litigation address water use in the Flint River Basin, where there are no federal facilities.

Extensive negotiations have likewise failed to yield any resolution. As early as January 3, 1992, the States entered into a Memorandum of Agreement ("MOA"), the purpose of which was to commit themselves "to a process for cooperative management and development of regional water resources" and to engage in what was known as the "Comprehensive Study." The Comprehensive Study was initiated pursuant to the States' efforts to settle litigation initiated by the State of Alabama. The Comprehensive Study led then to the Apalachicola-Chattahoochee-Flint River Basin Compact, Pub. L. No. 105-104, 111 Stat. 2219 (1997) ("ACF Compact").

Florida and Georgia, along with Alabama, ratified the ACF Compact in 1997, which incorporated certain terms of the 1992 MOA. Among those terms was Article VI(c), designed to prevent any State from acquiring any rights during the negotiation period or thereafter in the absence of an agreement. Specifically, the ACF Compact recognized that, although storage and upstream consumptive uses could continue to increase as negotiations continued, those uses would not become "permanent, vested or perpetual rights to the amounts of water used between January 3, 1992 [the date of the MOU] and the date on which the [ACF Compact] Commission adopts an allocation formula." ACF Compact, Art. VI(c). The parties to the ACF Compact intended to develop an allocation formula to equitably apportion the waters of the ACF

Basin among the three States while protecting the water quality, ecology, and biodiversity of the Apalachicola Region. Although the ACF Compact was initially set to terminate at the end of 1998, the States extended the termination date several times in hopes of obtaining an apportionment agreement.

Although it was once foreseen as the legal vehicle to share the waters of the ACF Basin, the ACF Compact failed when Georgia secretly abandoned the process and attempted to meet its needs without regard to its sister States through settlement of the *Southeastern Federal Power Customers* litigation. *Alabama v. U.S. Army Corps of Eng'rs*, 357 F. Supp. 2d 1313, 1318 (N.D. Ala. 2005), vacated and remanded by *Alabama v. U.S. Army Corps of Eng'rs*, 424 F.3d 1117 (11th Cir. 2008) (discussing Corps' and Georgia's failure to deal with Florida and Alabama in good faith). Given Georgia's bad faith actions, which led directly to the termination of the ACF Compact ten years ago, there is no further prospect of a compact-based solution. *Cf. Nebraska v. Wyoming*, 325 U.S. at 608 (denying motion to dismiss and stating: "A genuine controversy exists. The States have not been able to settle their differences by compact.").

Moreover, from 2003 up to and including this year, the three States have made numerous attempts to resolve this dispute through formal and informal discussions, as well as court-sponsored mediation (including sessions facilitated by the U.S. Secretary of the Interior and the Council on Environmental Quality). *See, e.g.*, Joint Motion for Order Regarding

Confidentiality of Settlement Negotiations, *In re Tri-State Water Rights Litigation* (No. 315). The current and past Governors of the three States have met personally, as well, in furtherance of developing a negotiated resolution. Unfortunately, all such efforts have failed. Only this Court can provide the relief Florida seeks: an equitable apportionment of the waters of the ACF Basin and a decree enforceable against Georgia.

CONCLUSION

As set forth above, Florida has established (1) there is an actual dispute between sovereign states over the apportionment of interstate waters, (2) the actions of Georgia have caused and will continue to cause direct, immediate, and irreparable harm to Florida, and (3) no other forum or means exist for resolving this dispute. Florida submits respectfully, therefore, that the Court grant the motion for leave to file a complaint and adjudicate Florida's claim against Georgia for an equitable apportionment of the waters of the ACF Basin.

Respectfully submitted,

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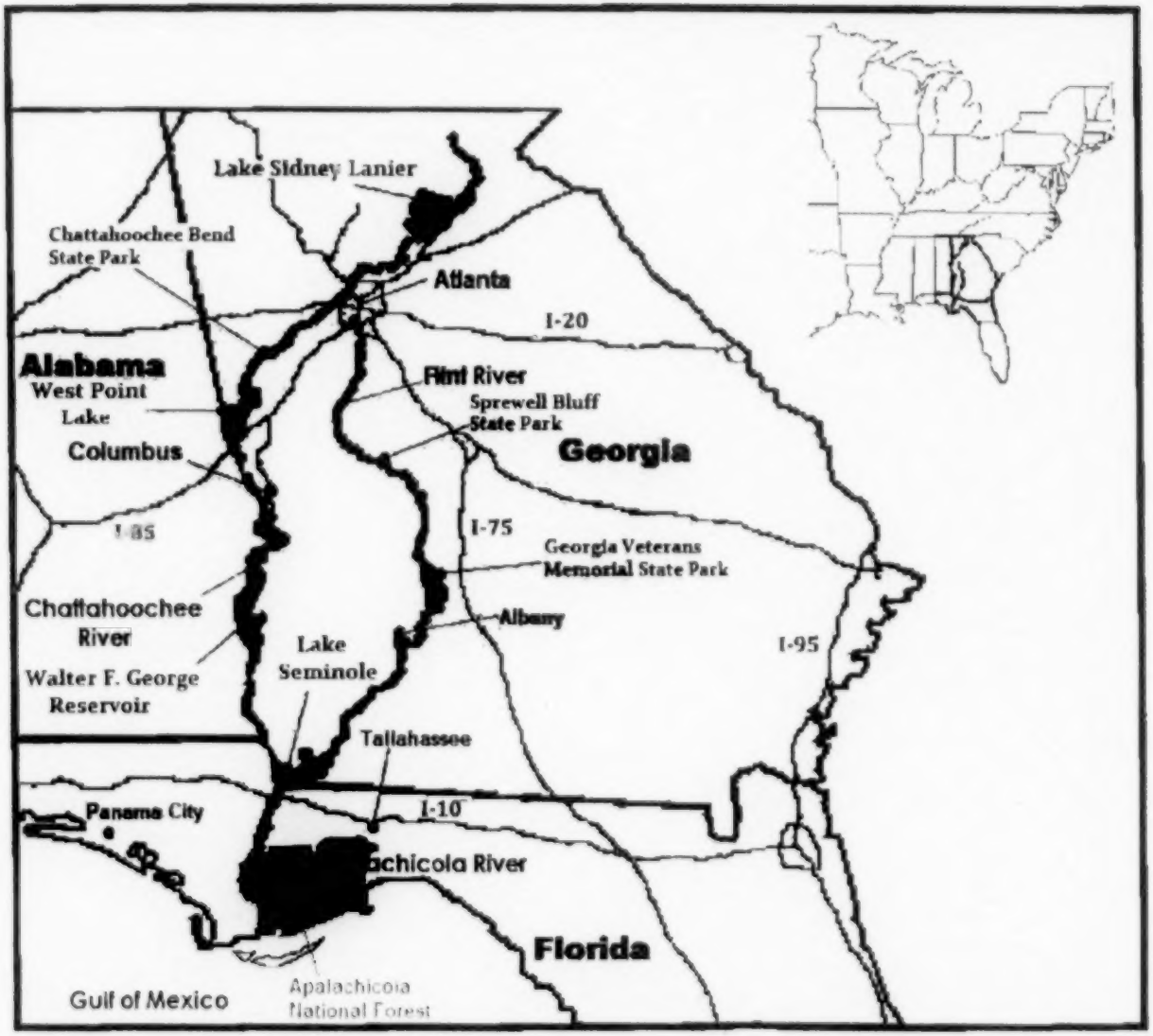
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Chattahoochee Bend State Park
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I-20
Alabama
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Columbus
Flint River
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Georgia
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Georgia Veterans Memorial State Park
Chattahoochee River
Walter F. George Reservoir
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I-95
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Panama City
I-10
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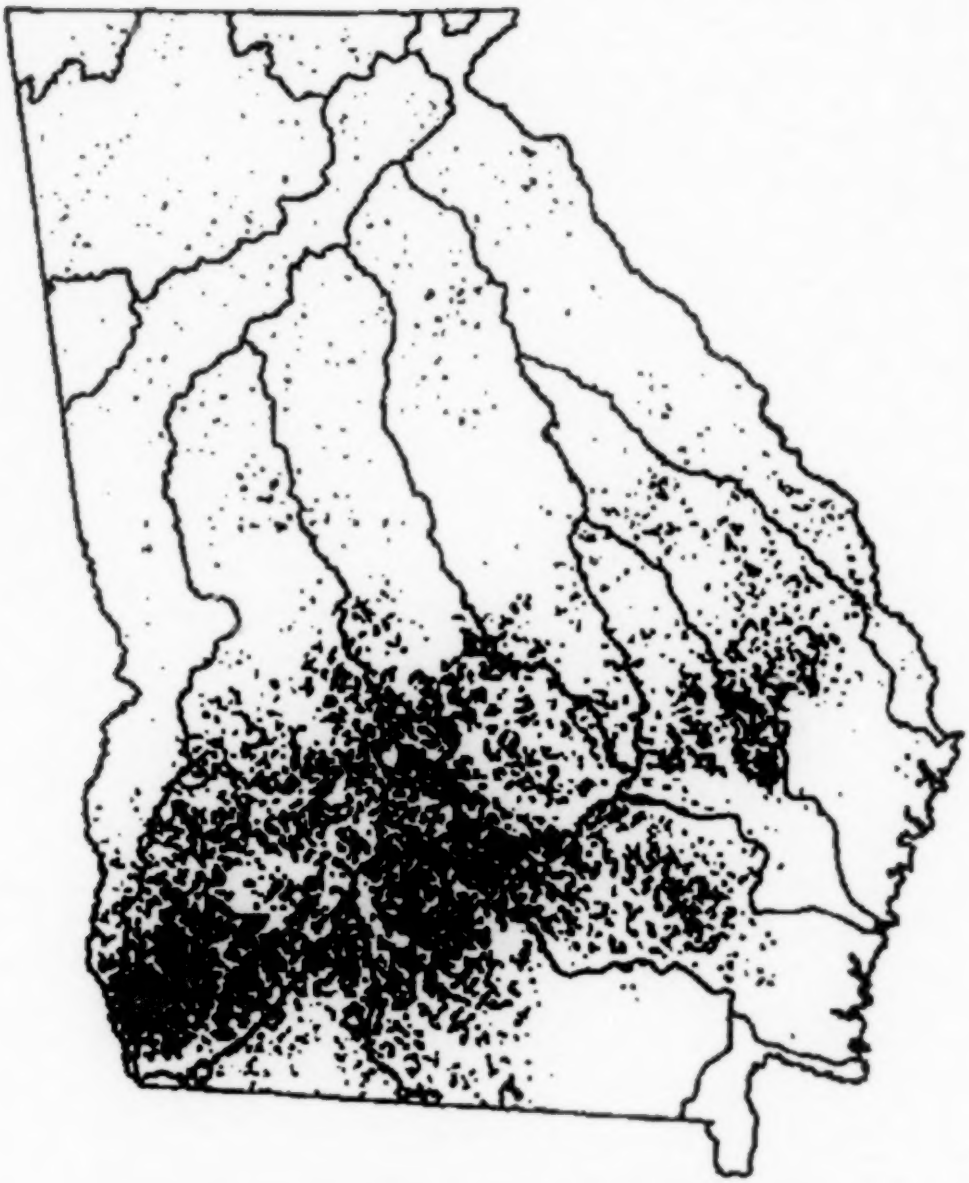
Florida
Gulf of Mexico
Apalachicola National Forest



Permitted Withdrawals for Irrigation within the State of Georgia
Source: Georgia DNR EPD

- Groundwater Sources
- Surface Water Sources
- ☐ River Basins

Affidavit of Judson H. Turner

1. My name is Judson H. Turner. I am Director of the Georgia Environmental Protection Division ("EPD") of the Georgia Department of Natural Resources.

2. In May 2000, the State of Georgia submitted to the Assistant Secretary of the Army for Civil Works a request for reallocation of storage in the Lake Lanier conservation pool to provide sufficient water supplies to meet future municipal and industrial water supply needs of 705 million gallons per day (mgd). In support of that request, Georgia provided an Affidavit from then-EPD Director Harold Reheis discussing Metropolitan Atlanta's then-current and projected water supply needs and why Georgia needed a reallocation of storage in Lake Lanier to meet those needs. Georgia's water supply request remains pending with the Corps. The purpose of this Affidavit is to provide updated data and information that are relevant to that request.

3. The State of Georgia is responsible for managing the quantity and quality of the waters of the State for public and private water supply, and for agricultural, industrial, and recreational uses, while protecting the environment and human health. Georgia law provides that "the government of the state shall assume responsibility for the quality and quantity of such water resources and the establishment and maintenance of a water quality and water quantity control program adequate for present needs and designed to

care for the future needs of the state." O.C.G.A. § 12-5-21(a).

4. EPD is the state agency to which state law delegates the responsibility for regulating withdrawals of water from, and discharges of pollutants into, the surface waters of the State. To fulfill this responsibility, EPD maintains data on the population of counties and municipalities within the State, and projections of the State's future population growth and water needs. EPD's expertise in hydrologic and water quality modeling allows it to assess the impact of water withdrawals and wastewater returns. EPD prioritizes water needs and evaluates alternatives for meeting these needs from the State's finite water resources.

GEORGIA'S NEED FOR WATER SUPPLY FROM LAKE LANIER

Current Population and Projections for Future Growth

5. More than 3.3 million Georgians currently rely upon withdrawals of water directly from Lake Lanier or withdrawals of water that the Corps releases from Lake Lanier to the Chattahoochee River to meet their water supply needs. Attached as Appendix 1 is a table that identifies the counties within which municipal and industrial water use customers are dependent in whole or in part on withdrawals and releases from Lake Lanier for their water supply.

6. Also shown in Appendix 1 are projected populations of the counties that will depend on significant amounts of water from Lake Lanier in the future. EPD projects that the number of Georgians who depend upon Lake Lanier for water supply will rise to more than 6 million by around 2040. The numbers in Appendix 1 come from the last published projections of the Georgia Office of Planning and Budget ("OPB"). EPD also reviewed the last published projections generated by the Metropolitan North Georgia Water Planning District (the "Metro Water District").

7. Municipal water systems in six counties within the Chattahoochee River watershed above the confluence with Peachtree Creek currently withdraw water from the Lake Lanier/Chattahoochee River system. EPD projects that water systems in four additional counties that are riparian or tributary to Lake Lanier will depend upon withdrawals from Lake Lanier in the future. In addition, the following other counties rely on Lake Lanier for water supply: Bartow, Cherokee, Clayton, Douglas, Fayette, Henry, Paulding, Rockdale, and Walton.

8. Counties that rely on Lake Lanier for water supply comprise the majority of the population for the Atlanta Metropolitan Statistical Area ("MSA"), which, according to the U.S. Census Bureau, is the ninth largest MSA by population in the United States. From 2000 to 2010, the Atlanta MSA grew by 24%, a growth rate exceeded by only two other MSA's in the United States. Two counties in the Atlanta MSA (Forsyth and Paulding) were among the 10 fastest

growing counties in the United States during this period, both growing at rates greater than 74% for the decade. Gwinnett County added almost 217,000 persons to its population over the decade; for the same period, only 16 counties in the United States added more people.

Municipal and Industrial Water Supply Needs

9. Attached as Appendix 2 and Appendix 3 are the 2011 statistics for water withdrawals by the permit holders who rely upon the Lake Lanier/Chattahoochee River system. The average rate of water withdrawn directly from Lake Lanier in 2011 was 115.2 mgd. *See* Appendix 2. The annual average rate of water withdrawn from the Chattahoochee River between Buford Dam and Peachtree Creek was 245.7 mgd. *See* Appendix 3.

10. Appendix 4 shows projected withdrawals from Lake Lanier and the Chattahoochee River above the confluence with Peachtree Creek for the year 2040. EPD developed its forecasts for future water supply need projections in cooperation with the Metro Water District. These forecasts are based on a number of factors, including population, employment, and commercial and residential consumption rates.

11. EPD and the Metro Water District project that the nine local water systems that currently withdraw water from Lake Lanier or the Chattahoochee River above the confluence with Peachtree Creek will continue to do so. These systems are: City of

Gainesville, City of Buford, Gwinnett County Water and Sewerage Authority, Forsyth County, City of Cumming, Atlanta-Fulton Water Resources Commission, DeKalb County Public Works (Water and Sewer), Cobb County Marietta Water Authority, and City of Atlanta.

12. Of these, five systems – City of Gainesville, City of Buford, Gwinnett County Water and Sewerage Authority, Forsyth County, and City of Cumming – withdraw from Lake Lanier. The other four facilities – Atlanta-Fulton Water Resources Commission, DeKalb County Public Works (Water and Sewer), Cobb County Marietta Water Authority, and City of Atlanta – withdraw from the Chattahoochee River upstream of the Peachtree Creek confluence. In addition, EPD projects that Habersham, White, Lumpkin, and Dawson Counties in the future will need to withdraw approximately 41 mgd from Lake Lanier by 2040.

13. The Metro Water District's most recent Water Supply & Conservation Management Plan includes projections for municipal and industrial water supply needs for 2035 and 2050. Based on these projections, adding the 41 mgd of withdrawals by Habersham, White, Lumpkin, and Dawson Counties, and assuming that growth in water usage between 2035 and 2050 will be roughly linear, water supply needs that are dependent on withdrawals and special releases from Lake Lanier will meet or exceed 705 mgd on an annual average basis by 2040. This includes direct withdrawals from Lake Lanier of 297 mgd and

withdrawals of 408 mgd from the Chattahoochee River below Buford Dam and above the confluence of the Chattahoochee River and Peachtree Creek.

14. Note that in calculating its water supply projections, the Metro Water District used a population growth rate for the region that is lower than the rate of growth that OPB has projected. Taking into account differing population projections and other variables affecting demand, EPD projects that municipal and industrial water supply demands that are dependent upon withdrawals and special releases from Lake Lanier will reach 705 mgd (including 297 mgd lake withdrawals and 408 mgd river withdrawals) sometime between 2035 and 2045. It is reasonable to plan using the assumption that Georgia's water supply needs will be at least 705 mgd by 2040.

15. In light of Georgia's projections that its water supply needs from Lake Lanier will equal or exceed 705 mgd by 2040, if not a few years sooner, Georgia's request of the Corps is unchanged from what was requested in 2000: that the Corps operate Lanier to accommodate withdrawals of up to 297 mgd annual average from Lake Lanier and 408 mgd annual average from the Chattahoochee River between Buford Dam and the confluence with Peachtree Creek.

16. Georgia plans to help meet demands from Lake Lanier with water that will be stored in the proposed Glades Reservoir upstream of Lake Lanier on Flat Creek, released to Flat Creek, and will flow into Lake

Lanier to be withdrawn from one or several of the intakes in Lake Lanier. The Glades Reservoir currently is in the permitting process. Based on reasonable assumptions regarding operation of Glades Reservoir, EPD projects a 30-40 mgd yield from Glades Reservoir. EPD plans to work with the Corps and the reservoir sponsors to ensure that the Glades Reservoir serves as a net benefit to the system yield, provided that the Corps will be able to meet water supply needs of 705 mgd from Lake Lanier. Because the 30-40 mgd released from Glades Reservoir will be withdrawn from Lake Lanier at the same rate that it enters Lake Lanier, no storage should be required for the withdrawal of that water.

Water Conservation

17. The per capita water use rate in the Metropolitan Atlanta Region has fallen in recent years, and the projected demand the region assumes that per capita water use within the region will continue to fall. The use rate is currently 148 gallons per capita per day (gpcd), and is expected to decline to 135 gpcd by the 2035-2040 timeframe. The decline in per capita water use has and is expected to continue to result from implementation of aggressive state and local water conservation policies, explained in greater detail below. Note that per capita water use and total population are among the factors, but are not the only factors, used to calculated total projected water use in the areas that are to be supplied by withdrawals and releases from Lake Lanier.

18. In 2001, the Georgia General Assembly created the Metro Water District and charged it with developing and maintaining comprehensive long-term plans for water supply and conservation, wastewater management, and watershed management for metro Atlanta. The Metro Water District is comprised of 15 counties, 92 cities, and 56 water supply systems. The plans are implemented by local water systems and local governments and are enforced by the State of Georgia through water permits and through eligibility for grants and loans. The Metro Water District completed development of its initial set of plans in September 2003. The governments within the Metro Water District spent the ensuing five years implementing the plans. In 2009, the Metro Water District adopted the first major update of its plans largely based upon lessons learned during the 2004-2009 implementation period.

19. Water conservation is an important element of the Metro Water District's Water Supply and Water Conservation Plan. The water conservation measures in the Plan are the most aggressive in Georgia and among the most aggressive in the United States. The 2003 Plan, as amended, included ten conservation measures applicable to all water systems and/or local governments. The 2009 update retained all and strengthened three of those measures. The Water Supply and Water Conservation Plan was again amended in December 2010 and added seven measures – two measures applicable throughout the District and five that apply to water systems that

withdraw from Lake Lanier or the Chattahoochee River (denoted with asterisk). The water conservation measures in the Metro Water District Plan include: 1) conservation pricing; 2) replace older, inefficient plumbing fixtures; 3) pre-rinse spray valve retrofit education; 4) rain sensor shut-offs on new irrigation systems; 5) sub-unit meters in new multifamily buildings; 6) assess water losses with IWA/AWWA water audit methodology and develop programs to reduce systems water loss; 7) residential water audits; 8) low-flow retrofit kits for residential; 9) commercial water audits; 10) education and public awareness activities; 11) high-efficiency toilets and urinals in government buildings; 12) new car washes to recycle water; 13) expedited water loss reduction*; 14) multi-family HET rebates*; 15) meters with point of use leak detection*; 16) private fire lines to be metered*; 17) maintain a water conservation program*; 18) water waste policy or ordinance; and 19) HET plumbing fixtures in new construction consistent with state legislation.

20. The Metro Water District has made water conservation a priority, and local water systems have shown a strong record of implementation of water conservation measures. In annual progress surveys, the District has found: that tiered water conservation rates are in place throughout the metro area; that water systems serving 96% of the population offer toilet rebates, and over 76,872 older toilets have been replaced since 2008; that the larger systems have implemented programs to reduce system water losses,

and, in 2010, over 10,000 leaks were repaired; and 98% of the population of the metro area is targeted with educational and outreach programs by local governments.

21. In 2010, the Georgia Water Stewardship Act was passed by the Georgia General Assembly and signed by Governor Sonny Perdue. For those water users relying on Lake Lanier and the Chattahoochee River above Peachtree Creek, the Water Stewardship Act amplified and supplemented the 19 water conservation policies and programs identified in the Metro Water District's water supply and conservation plan. Among the Act's provisions that supplement the Metro Water District's demand management initiatives are: 1) requiring state government agencies to examine their programs, practices, and rules to identify opportunities to provide for voluntary water conservation; 2) requiring local governments to include water conservation measures in local comprehensive plans; 3) incentives for public water systems to use full cost accounting; and 4) technical assistance to local governments and public water systems for water loss abatement activities.

22. In 2012, EPD conducted an evaluation of the 2000-2010 rates of growth in water demand compared to rates of population growth in the counties with the 15 largest municipal surface water systems in Georgia. Six of the 15 largest municipal surface water systems are located in five counties (i.e., Fulton, DeKalb, Cobb, Gwinnett, and Hall) that rely upon withdrawals or water supply releases from Lake

Lanier. The evaluation showed that water use in each of the five counties demonstrated a consistent decreasing trend over the decade, while population in each of those counties increased over the decade. Trends such as these in the five counties and beyond clearly indicate that the water conservation initiatives being implemented in the Atlanta region by the Metro Water District are significantly reducing per capita water demand.

Crediting of Return Flows

23. EPD projects that returns of treated wastewater to Lake Lanier and tributaries immediately upstream of Lake Lanier will mitigate the effect of withdrawals from Lake Lanier. EPD projects that the average annual return of treated wastewater to Lake Lanier and its tributaries in 2040 (assuming withdrawals of 297 mgd) will be approximately 165 mgd. *See* Appendix 4. The net withdrawal from Lake Lanier is therefore expected to be 132 mgd (297 mgd minus 165 mgd).

24. The State of Georgia will allocate the treated wastewater returned to Lake Lanier and its tributaries to particular users of water supply storage in Lake Lanier. This should increase the yield of the storage account or accounts to which the wastewater return is credited rather than count the same as natural inflows, which increase the yield of a water supply storage account only according to the percentage of total conservation storage owned by that user.

25. I am aware of no legal or legitimate policy reason why the Corps should not credit metered return flows to Lake Lanier or its tributaries exclusively to individual water supply storage accounts to which the State of Georgia has allocated such returns.

26. In accordance with federal law, the Corps has long recognized that it is the State, not the Corps, that determines and allocates water rights, and that the Corps should defer to the State's allocation of water rights. Allocation of wastewater return flows to individual users also is a matter of water rights that is best determined by the State.

27. The return of highly-treated wastewater to an existing reservoir increases the yield of that reservoir by reducing the net withdrawals. As a result, return flows keep reservoir levels higher and mitigate the impact of water supply withdrawals. Return flows to a water supply reservoir are a form of water reuse that Georgia's statewide water plan favors.

28. EPD-permitted discharges from wastewater treatment plants are a function of water use and not rainfall and runoff, and therefore are more consistent and reliable than natural inflows. Because they are metered and reported to EPD, wastewater discharges also are easily monitored and accounted for, ensuring that a user would not obtain credit for any returns than do not actually occur.

29. It is more expensive for local wastewater utilities to discharge wastewater to Lake Lanier than to

the Chattahoochee River or its tributaries, because they must treat the wastewater to a higher degree to meet applicable water quality standards. To make it worthwhile for these utilities to return wastewater to Lake Lanier, there must be policies in place that incentivize those returns. Therefore, EPD desires to credit to individual water users the exclusive right to withdraw or store the wastewater returns that are made. The Corps should do the same, or should defer to the State's allocation.

30. Thus, consistent with federal law and good policy, in determining the yield of the storage space that is held by or for a water supply user, the Corps should count exclusively to that user's storage space such returns as the State has allocated to that user.

Net Municipal and Industrial Water Consumption

31. A large portion of the metro Atlanta area's treated wastewater is returned to the Chattahoochee River downstream of Buford Dam and upstream of the United States Geological Survey ("USGS") gaging station at Whitesburg, Georgia. In 2011, an annual average of 34.4 mgd of treated wastewater was discharged to the Chattahoochee River between Buford Dam and the Peachtree Creek confluence, and an annual average of 184.2 mgd of treated wastewater was discharged to the Chattahoochee River between the Peachtree Creek confluence and the USGS Whitesburg gage. EPD projects that by 2040 (or as of the date when water withdrawals reach 705 mgd),

the amount of treated wastewater discharged to the Chattahoochee River between Buford Dam and the Whitesburg gage will be 385 mgd on an annual basis, including 94 mgd discharged to the reach between Buford Dam and the Peachtree Creek confluence, and 291 mgd to the reach between the Peachtree Creek confluence and the USGS Whitesburg gage. When combined with return flow directly into Lake Lanier, the total return of wastewater associated with the withdrawal of 705 mgd is projected to be 550 mgd, or 78% of the total withdrawal.

32. Therefore, Georgia projects that as of 2040, the total consumptive use from municipal and industrial water supply from Lake Lanier and from the Chattahoochee River above the Whitesburg gage will be approximately 155 mgd, or 239 cfs, on an annual average basis. To put this amount into perspective, it is a mere 1.1% of the 21,587 cfs annual average daily flow of the Apalachicola River just downstream of the Georgia-Florida state line.

In-Stream Demands for Water Quality

33. Metropolitan Atlanta local governments that discharge treated wastewater to the Chattahoochee River also rely upon releases from Lake Lanier to provide consistent flows in the river to assimilate those discharges.

34. EPD has developed a mathematical model, known as the Chattahoochee River Model, to simulate temperature, dissolved oxygen, and the concentrations

of individual pollutants (biochemical oxygen demand, organic nitrogen, ammonia, nitrate, organic phosphorus, and ortho phosphate) under different flow, intake, discharge, and meteorological conditions.

35. Based on conditions that existed at the time of Georgia's 2000 water supply request, EPD determined that certain seasonally-varying flows in the Chattahoochee River at the confluence with Peachtree Creek would be needed to meet water quality standards. Thanks to improvements in wastewater treatment since 2000, the Chattahoochee River Model now shows the flows needed to assimilate wastewater in the Chattahoochee River and maintain water quality standards may be reduced.

Why Assurance of Long-Term Supply is Needed Now

36. If Lake Lanier were not available to satisfy the needs included in Georgia's water supply request, additional reservoirs and water resource projects would be needed to replace it. Due to the complexity and uncertainty associated with the permitting processes, planning for the development of new water supply reservoirs must generally begin 15 to 25 years, or even more, before there is a demand for the water.

37. The three major stages of the planning processes are 1) alternatives analysis and source evaluation; 2) detailed engineering and environmental studies; and, 3) state and federal permitting. The first stage includes forecasting future service area population and

water demands; evaluating demand management and supply alternatives for meeting the demands; evaluation of source water capacity, quality, and reliability; and development of environmental, historic/archeological, and socio-economic assessments of impacts. In the second stage, detailed engineering and environmental studies must be conducted on the preferred alternatives, and funding sources must be identified and secured. In the third stage, if a new or expanded water supply reservoir is the preferred alternative, the applicant must apply for and secure a Federal Clean Water Act Section 404 permit (issued by the Corps of Engineers), a Clean Water Act Section 401 Water Quality Certification (issued by the State of Georgia), a Safe Dams permit and a water withdrawal permit (both issued by the State of Georgia), and a Safe Drinking Water Act Permit (also issued by the State of Georgia). Before the Corps of Engineers can issue a Section 404 permit, it must comply with provisions of the National Environmental Policy Act (i.e., prepare an Environmental Assessment and possibly an Environmental Impact Statement) and federal regulations. Of all the stages, the Section 404 permitting process generally requires the greatest amount of time and often is followed by legal challenges to the issued permit. As shown in Appendix 6, the process of studying, designing, permitting, financing, and constructing water supply reservoirs in Georgia has required a range of 5 to 25 years to complete, based upon six cases selected for illustration.

38. Georgia desires assurance of storage for direct lake withdrawals through storage contracts. As for water supply releases, the Corps coordinates those with the Atlanta Regional Commission on a weekly basis. According to the 2011 ruling of the United States Court of Appeals for the Eleventh Circuit, the Corps is authorized to provide these releases without reallocating storage to those water supply users downstream. Nevertheless, to assure long-term certainty for all concerned, it is important that the Corps, Georgia, and local governments that Georgia may designate enter into a written agreement documenting their understandings regarding how and when releases for water supply will be coordinated.

Why Lake Lanier Continues to be the Best Alternative

39. As discussed in the Reheis Affidavit, numerous studies dating back to the 1960s have consistently concluded that Lake Lanier and the Chattahoochee River provide the most economical and environmentally-protective alternative for meeting the water supply needs of the region. *See* Reheis Affidavit at ¶¶ 21-28. As the Reheis Affidavit explains, a number of alternatives were investigated up through 1999, and none of them was determined to be a reasonable alternative. *See id.*

40. As part of the planning process for its 2003 plans and 2009 update, the Metro Water District considered potential water supply source alternatives

for the communities in the study area through the planning period. The District's *Water Supply and Water Conservation Management Plan* determined that "after reviewing alternatives to the use of the federal reservoirs, the Metro Water District has concluded that there are no alternatives to the Chattahoochee River and the Etowah River as major water supply sources for north Georgia."

41. A water study task force, comprised of metro Atlanta area government and business leaders and assisted by Boston Consulting Group and technical experts, reached the same conclusion in 2009. The Governor of Georgia convened the task force, known as the Water Contingency Planning Task Force, in response to a decision of the United States District Court that threatened to eliminate virtually all water supply withdrawals and releases from Lake Lanier. The task force studied the costs associated with developing alternative sources of water resources to replace Lake Lanier if the Lake were to cease operating for water supply. The task force concluded that "Lake Lanier is by far the best water supply source for the metro region. If the recommended contingency options were required instead, these options would impose significant incremental costs and environmental impacts the region does not currently face." *See Water Contingency Planning Task Force Findings and Recommendations, 21 December 2009.*

IMPACT OF GEORGIA'S MUNICIPAL AND INDUSTRIAL WATER WITHDRAWAL ON LAKE LANIER AND WATERS DOWNSTREAM

42. EPD has performed computer modeling of the reservoir operations and water withdrawals contemplated in Georgia's water supply request to determine the effects of those operations and withdrawals on Lake Lanier and the Chattahoochee River. EPD's modeling is summarized below and discussed in greater depth in Exhibit A, the Memorandum of Dr. Wei Zeng, manager of EPD's Hydrological Analysis Unit. Although Dr. Zeng, for the purpose of his analysis, assumed that the Corps will continue to operate in accordance with the current version of the Revised Interim Operation Plan ("RIOP"), the State of Georgia continues to believe that the ACF system can be operated more efficiently for the benefit of all Basin stakeholders and is proposing alternative to the RIOP in our comments on the ACF Water Control Manual EIS Scoping Comments.

Hydropower Production at Lake Lanier and within the ACF System

43. The projected water withdrawals and Corps operations necessary to support them will not have a material impact on the production of hydropower at Buford Dam or the federal reservoirs in the ACF Basin as a whole, and any impact will be gradual over the next several decades. EPD's modeling indicates that, if viewed in terms of hydropower generation for the federal reservoirs in the ACF Basin as a whole,

when Georgia has reached demands of 705 mgd and year 2040 water supply needs are met throughout the rest of Georgia, average annual power generation will be 970,900 MWh, as compared with the 988,055 MWh of (simulated) annual average generation with 2011 water supply levels. Thus, EPD projects a mere 1.7% decrease in hydropower generation basin-wide. *See* Zeng Memorandum at Exhibit A.

44. When Georgia has reached demands of 705 mgd from Lanier and the Chattahoochee River above the Peachtree Creek confluence, and 2040 water supply demands exist throughout the remainder of the basin, the annual average energy generated at Lake Lanier is modeled to be 116,435 MWh, in comparison to the amount of 123,735 MWh under 2011 water use conditions. Thus, the amount of hydropower produced at Lake Lanier with 2040 demands will be only 6% less than the amount being produced with current water supply demands. The effect will be even less in the years before Georgia's water demand has reached 705 mgd. *See* Zeng Memorandum at Exhibit A.

45. Georgia's conclusions are consistent with those reached by the Corps in its assessment of the impact to hydropower from granting Georgia's water supply request as compared with a baseline that assumed virtually no water supply operations at all. Using that baseline of comparison, the Corps concluded that the water supply operations and lake withdrawals would result in less than a 1% reduction to ACF Basin dependable hydropower capacity, and that the lake withdrawals and water supply releases

contemplated by Georgia's water supply request would result in reductions in basinwide hydropower value of 4.4% and less than 1%, respectively. *See* Zeng Memorandum at Exhibit A.

Recreation at Federal Reservoirs

46. The Corps has established three thresholds for assessing impact of reservoir elevation to recreation at Lake Lanier. The first threshold is called Initial Recreation Impact Level ("IIL"), which is the level at which falling reservoir elevation first has some adverse effect on recreation. The Corps has determined that the IIL at Lake Lanier is 1066 feet above mean sea level (msl). The second threshold, the Recreation Impact Level ("RIL"), is the level at which significant impacts to concessions and recreation occurs. The RIL at Lake Lanier is 1063 feet above msl. The third threshold is Water Access Limitation Level ("WAL"), which is the elevation at which more serious impacts to recreation are observed. The WAL at Lake Lanier is 1060 feet above msl.

47. As discussed at greater length in the attached Memorandum of Wei Zeng, under 2007 hydrologic conditions, with existing water supply demands, Lake Lanier is below RIL for 27 days during the primary recreational season in that year (May 1-September 8). EPD's modeling shows that this level of recreation impact will be increased by only 21 days under 2007 hydrologic conditions if Lanier is operated to meet the metro area's 2040 water needs of 705 mgd and

Georgia's 2040 water supply needs in the remainder of the basin exist. EPD's modeling also shows that if Lanier is operated to meet Georgia's water supply request, metro area water supply needs from Lake Lanier reach 705 mgd, and 2040 water demands exist elsewhere in the basin, during the recreational season, the elevation of Lake Lanier would be below the ILL for only 5% more of the time, below the RIL for only 8% more of the time, and below the WAL 8% more of the time, than under the baseline condition. *See* Zeng Memorandum at Exhibit A.

48. At West Point Lake, the Corps has designated a ILL of 632 feet above msl, a RAL of 628 feet above msl, and a WAL of 627 feet above msl. If Lake Lanier is operated to meet water supply needs of 705 mgd, the number of days when West Point Lake falls below the RIL and ILL actually will be lessened, and there will be only a 1% increase in the number of days in which the elevation falls below the WAL.

49. For Lake Walter F. George, the ILL is 187 feet above msl, the RAL is 185 feet above msl, and the WAL is 184 feet above msl. With 2040 water supply demands imposed on the system, Lake Walter F. George will not experience elevations below RIL or WAL, and will see an increase of only 1% to 2% in the number of days below the ILL. *See* Zeng Memorandum at Exhibit A.

Navigation

50. As the ACF Basin reservoirs, for reasons unrelated to Georgia's water supply usage, are no longer used to support commercial navigation except under rare circumstances, Georgia's water supply request will not impact navigation.

Lake Lanier's Flood Control Function

51. The current request to reallocate the conservation storage to meet Georgia's projected future water supply needs does not involve changing the elevation of the top of conservation pool or the size of the flood control pool. Thus, reallocating part of the conservation storage to accommodate Georgia's increase water will have no impact on the flood control capability of Lake Lanier or the ACF system. Although changes to the size of the flood control pool are not necessary for the Corps to grant Georgia's request, Georgia may still recommend raising the conservation pool, at the appropriate time, if and when it determines that the benefits of doing so exceed any costs.

Impacts on Georgia/Florida State Line Flows

52. EPD's modeling indicates that the net water consumption associated with the municipal and industrial withdrawals contemplated in Georgia's water supply request is projected to have a minor impact on the flow in the Apalachicola River at the state line. *See* Zeng Memorandum at Exhibit A.

CONCLUSION

53. The foregoing information affirms and updates Georgia's 2000 request that the Corps operate Lake Lanier to meet water supply needs of 705 mgd annual average gross withdrawal, including 297 mgd annual average gross withdrawal from Lake Lanier and 408 mgd annual average gross withdrawal from the Chattahoochee River between Buford Dam and the confluence of the Chattahoochee River and Peachtree Creek. Accordingly, the Governor of Georgia has asked that the Corps grant Georgia's request by taking the following actions:

(a) Accommodate water supply demands by providing for 297 mgd annual average gross withdrawal from Lake Lanier and by making releases to allow 408 mgd annual average gross withdrawal from the Chattahoochee River between Buford Dam and the confluence with Peachtree Creek.

(b) Provide certainty for those municipal and industrial water withdrawals from Lake Lanier that require an allocation of storage by entering into long-term contracts. No storage should be required for withdrawals covered by existing relocation contracts or withdrawals of water released to Lake Lanier from Glades Reservoir upstream. Returns to Lake Lanier or its tributaries of treated wastewater should be credited exclusively to the storage accounts of those whom Georgia EPD designates to receive such credit.

(c) Provide certainty for those municipal and industrial water withdrawals from the Chattahoochee

River that rely upon special releases from Lake Lanier by entering into agreements that document the parties' understandings about assurance and coordination of releases.

(d) Release from Lake Lanier enough water to provide a flow in the Chattahoochee River at the confluence with Peachtree Creek as EPD may request to maintain applicable water quality standards.

FURTHER AFFIANT SAITH NOT.

This 10th day of January, 2013.

/s/ Judson H. Turner
Judson H. Turner

Sworn to and subscribed
before me this 10th day
of January, 2013

/s/ Yolanda P. Fanning
Notary Public
My commission expires: Sept. 29, 2013

[Notary Seal]

DECLARATION OF PATRICK TARA

1. My name is Patrick Tara. I am over the age of 21 years and make this declaration based on personal knowledge and facts known to me.

2. I am a professional engineer, licensed in the State of Florida. I have over 20 years of experience in the engineering field, specializing in surface water resources, hydrologically connected surface and groundwater systems and the development of hydrologic model parameters.

3. I hold a Master of Science in Civil Engineering and a Bachelor of Science in Civil Engineering, both from the University of South Florida.

4. My experience includes hydrologic data analysis (both temporal and spatial), hydrologic data collection, and hydrologic and hydraulic numerical modeling. I am experienced in the analysis of temporal hydrologic data, including: performing water budget studies, moving window statistical analysis, time series regression, flow duration, flow exceedance, and baseflow separation. Temporal time series analysis is critical for hydrologic model applications for both model input as well as model output calibration comparison.

5. I have extensive field experience in collecting hydrologic, hydraulic and meteorologic data, including the installation and maintenance of equipment to record tide levels, well levels, lake/river stage, rain, Doppler velocity, weather, Pan ET, and soil moisture.

6. I have developed and applied integrated hydrologic models as well as hydrologic, hydraulic, transport, and water quality, and salinity models. I have applied various models to watersheds, estuaries, rivers, lakes, and tidal inlets.

7. I have been engaged by the State of Florida to analyze the extent to which upstream consumption on the Chattahoochee and Flint Rivers in Georgia has adversely affected flows in the Apalachicola River in Florida.

8. I have reviewed available hydrologic data and performed various modeling analyses, and I conclude that upstream consumption in the Georgia portion of the ACF Basin is depleting the rate and volume of flow in the Apalachicola River.

9. Overall, upstream water use in Georgia has impacted flow in the Apalachicola River at times by up to 3,000-4,000 cubic feet per second ("cfs"). The hydrologic effect of this depletion varies by season. In the winter, its impact is less consequential. In the summer months, when consumption reaches its peak, Georgia uses deprive the River of almost half the total flow it would otherwise receive.

10. Future additional consumption and storage of water in Georgia will result in even lower flows in the Apalachicola River and Bay. This will increase the frequency, duration and intensity of adverse hydrologic impacts I have already documented.

11. I have also analyzed historical climatic data from the Apalachicola-Chattahoochee-Flint River Basin. These data demonstrate that the climate (e.g., reduced rainfall or "drought") cannot be the sole cause of depletions to the Apalachicola River. Rainfall patterns before and after 1950 do not display statistically significant differences. However, the relationship between rainfall and flow has changed over time such that rainfall in the Basin now generates less basin discharge than it historically did. Thus, reductions in rainfall cannot explain all of the impacts on the flows in the Apalachicola River.

12. In my professional experience, the flow reductions I already have documented are substantial.

I declare under penalty of perjury that the foregoing is true and correct.

September 26, 2013
Date

Patrick Tara

DECLARATION OF J. DAVID ALLAN, Ph.D.

1. My name is J. David Allan. I am over the age of 21 years and make this declaration based on personal knowledge and facts known to me.

2. I am a professor of freshwater biology and ecology in the School of Natural Resources and Environment at the University of Michigan, Ann Arbor, Michigan. I received a Ph.D. in zoology from the University of Michigan in 1971, and a B.S. from the University of British Columbia in 1966. I completed a post-doctoral Fellowship at the University of Chicago in 1972.

3. My research has focused on stream ecology; freshwater conservation and management; river flow variability and maintenance of environmental flows; and the impact of anthropogenic influences of river ecosystems. I have authored or coauthored over 100 reports and articles concerning the ecology of rivers and the impact of human activity on rivers. I have also authored or co-authored two textbooks regarding river ecology.

4. I am personally familiar with the Apalachicola River and Bay located in the state of Florida. Over the past 16 months, I have been engaged in a detailed study concerning the ecological impacts to the Apalachicola River drainage basin, examining ecological harm that has resulted due to alteration of the flow regime of the Apalachicola River by artificially diminished inflows.

5. The Apalachicola River is the largest river in the Florida panhandle in terms of annual flow. Its floodplain is the largest river floodplain in Florida, and having minimal development, it remains one of the most intact forested floodplains in the contiguous United States. The freshwater, non-tidal floodplain ranges from 1-5 miles in width and covers an area of roughly 82,200 acres. Wet season high flows in the Apalachicola River historically have provided annual periods of inundation and connectivity to diverse floodplain habitats including complex networks of streams and sloughs within extensive areas of wetland forests. Flows normally decline following the flood season in winter and early spring, but very low flows in late spring and summer have occurred much more frequently and for much longer durations over the last decade than at any time since stream gage records began in 1922.

6. Ecosystems of the Apalachicola River and floodplain developed due to the natural flow regime of the Apalachicola River. Native mussels, fishes, floodplain trees and other biota, including federally listed species, depend on magnitude of river flow, its duration, frequency, and seasonal timing and rate of change to meet habitat requirements and complete their life cycles. Significant deviations from the natural flow regime are harmful to the ecosystem.

7. Ecosystems of the Apalachicola River have already suffered harm of a serious magnitude as a result of deviations in the natural flow regime. The construction of upstream dams, land use practices,

and withdrawals of water, such as for irrigation in Georgia, have altered the natural flow regime of the Apalachicola River. Alteration of the natural flow regime has harmed at least three species, now federally listed as threatened or endangered under the Endangered Species Act ("ESA"), 16 U.S.C. §§ 1531 *et seq*. Stresses associated with artificially diminished flows and river stage have negatively affected other aspects of aquatic habitat in the Apalachicola Basin, especially those that occur during low flow periods during spring, summer and fall.

8. The biodiversity of the Apalachicola Region in Florida is reflected in the presence of 142 freshwater and estuarine fish species (99 species in nontidal reaches plus an additional 43 species in tidal reaches of the river), 26 species of mussels (including 3 Federally listed mussels and 4 candidate species being petitioned for Federal listing), over 1,600 species of plants (including 342 species in wetland forests of the river floodplain). The Apalachicola River has the largest river floodplain forest in Florida and the greatest number of freshwater fish species in Florida. This river basin has the greatest herpetofaunal species richness in North America north of Mexico and one of the most important areas for reptiles and amphibians (particularly anurans, salamanders, snakes and turtles) in the United States. Ogeechee tupelo trees in the floodplain forest of the Apalachicola River are the principal source of commercially produced tupelo honey in the U.S.

9. Inflows from the Flint and Chattahoochee Rivers contribute to maintenance of critical habitat in the Apalachicola River for three species listed as threatened or endangered under the ESA. These species include the Gulf sturgeon and two mussel species, the Fat Three-Ridge and the Purple Bankclimber. In addition to these federally protected species, the flow regime of the Apalachicola River supports essential habitat for a wide range of species that are dependent on the Apalachicola River and its floodplain. The non-tidal portion of the Apalachicola River and floodplain are important for their high level of biodiversity and for the natural ecological processes that depend on river-floodplain connectivity and contribute to the health of the estuary and bay; and for the regional way of life that includes fishing, hunting, harvesting of tupelo honey, and forestry operations.

10. Flow reductions due to upstream consumption in Georgia to date have disrupted critical biotic components within the River and along its floodplain. These reductions have, for example, increased the frequency, duration and intensity of adverse biological events, such as the length of time that essential riverine and floodplain habitats are exposed to the atmosphere. Such exposure has resulted in the stranding of mussels, floodplain drying, and reductions in spawning and rearing habitat for a number of fish species.

11. Projected future water uses in Georgia are expected to result in low flows of greater frequency,

duration and intensity and will further harm existing plants and animals in floodplain habitats. Many existing species are likely to decline in number and risk becoming threatened, endangered, or extinct.

12. For example, further flow depletions will increase the extent to which side-channels are cut off from the main river, leaving stranded local populations of fish, mussels, and other components of the aquatic food web. Further depletions will also reduce the amount of viable habitats for tupelo trees and other floodplain forest resources.

13. Ultimately, future storage and uses of water in the Flint and Chattahoochee River Basins will cause increases in the duration, frequency, and intensity of low flows and rate of drawdown in the Apalachicola River attributable to upstream consumption. These further disruptions of the flow regime will cause additional irreparable harm of a serious magnitude through the continued degradation of the ecosystems of the Apalachicola River.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 30th day of September, 2013

J. David Allan

DECLARATION OF PAUL A. MONTAGNA, Ph.D.

1. My name is Paul A. Montagna. I am over the age of 21 years and make this declaration based on personal knowledge and facts known to me.

2. I am the Endowed Chair for Ecosystem Studies and Modeling at the Harte Research Institute for Gulf of Mexico Studies. I am also a professor of Environmental Science and coordinator of the Coastal & Marine System Science Doctoral Program, at Texas A&M University-Corpus Christi in Corpus Christi, Texas. I received a Ph.D. in biology from the University of South Carolina in 1983, an M.S. in biology from Northeastern University in Boston, Massachusetts in 1976, and a B.S. in biology from State University of New York at Stony Brook, New York in 1971. My research interests focus on ecological processes and changes in estuaries resulting from changes to freshwater inflows. I have authored over 100 papers concerning coastal ecosystems and their functional mechanisms.

3. I am personally familiar with the Apalachicola River and Bay located in the state of Florida. The Apalachicola River and Bay system has been recognized as a unique and environmentally sensitive resource. In fact, the Apalachicola Bay is among the most productive estuaries in the Gulf of Mexico. I have been engaged in a detailed study of the ecological impact to the Apalachicola Bay that has resulted from flow reductions to date and that are likely to result if the flow regime of the Apalachicola River is

further diminished. Multiple species and resources in the estuary and Bay have been adversely impacted already.

4. A poignant example is the eastern oyster. Historically, Apalachicola Bay has been one of the most productive oyster fisheries in America. Freshwater from the Apalachicola River that discharges into the Apalachicola Bay provides essential nutrients to the Bay and reduces its salinity to create conditions necessary to support commercial oyster industries. Altering the amount, rate and timing of the freshwater inflows to the Bay causes changes to these necessary conditions. Specifically, there is a direct, inverse relationship between inflow and salinity in the Bay, such that lower flows increase salinity and higher flows reduce salinity. Also, as freshwater flows in the Apalachicola River decline, the amount and quality of nutrients is diminished and the salinity increases, thereby creating conditions that are harmful to oysters and other shellfish.

5. Reduced flows from the Apalachicola River have caused increased salinity throughout the Bay. This impact alone has damaged and threatens the very survival of Apalachicola Bay oysters and other species over the long term.

6. Because of reduced freshwater inflows from the Apalachicola River that led directly to poor conditions for oyster growth and survival, a severe decline in the oyster harvests has occurred. Data show oyster production on commercially important oyster reefs in

2012 was the lowest in the past 20 years. Drastic declines in all age classes of oysters indicate that a collapse of the fishery has occurred in 2012. These data also indicate that many of the reefs have too few oysters to support commercial harvesting.

7. Flows to the Apalachicola River will be further depleted by anticipated future upstream consumption. When this occurs, the frequency, duration and intensity of already extant adverse impacts will increase in Apalachicola Bay. Reduced river flows will further reduce the amount of nutrients and sediments flowing into the Apalachicola Bay and create even higher salinity levels. Reduced nutrient inputs and higher salinity levels will reduce estuarine productivity, alter the historical community structure of the bay, and will prove harmful to all estuarine dependent species, but particularly those fixed to the bottom, such as oysters. As a result, oyster production will continue to decline to the point of extirpation.

8. Loss of viable oyster bars will cause a loss of important ecosystem services in the Apalachicola Bay. Oysters produce structure that performs multiple beneficial ecosystem services such as sediment stabilization, erosion control, shoreline protection, storm surge absorption, critical habitat for other estuarine species, and water quality enhancement by particle and nutrient removal. All of these services have suffered injury and will be lost unless oysters are protected from declining freshwater inflows from the Apalachicola River.

9. Further depletion of the flows of the Chattahoochee and Flint Rivers will result in low flows of greater frequency, duration, and intensity for the Apalachicola River. This increased disruption of the historical flow regime will, in turn, cause additional harmful changes of a serious magnitude to the Apalachicola Bay, and commercially viable oyster populations will cease to exist.

10. I declare under penalty of perjury that the foregoing is true and correct.

September 25, 2013
Date

Paul A. Montagna

RECORD AND BRIEFS

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Supreme Court, U.S.
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IN THE

Supreme Court of the United States

STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

STATE OF GEORGIA'S OPPOSITION TO FLORIDA'S MOTION FOR LEAVE TO FILE A COMPLAINT

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IN THE

Supreme Court of the United States

No. 142, Orig.

STATE OF FLORIDA,

Plaintiff,

v.

STATE OF GEORGIA,

Defendant.

STATE OF GEORGIA'S OPPOSITION TO FLORIDA'S MOTION FOR LEAVE TO FILE A COMPLAINT

INTRODUCTION

The flow of water from the Chattahoochee and Flint River basins in Georgia into the Apalachicola River in Florida is largely controlled by a system of federal dams and reservoirs operated by the U.S. Army Corps of Engineers. The Corps is currently updating the operating manual for those projects, and that process will directly affect the flow into the Apalachicola River. Florida, however, seeks to end-run those proceedings and embroil this Court in the same issues now pending before the Corps. The Court should not indulge Florida's attempt to disrupt the orderly resolution of what has already been a long-running dispute.

For more than two decades, Florida challenged, under the APA, the Corps' management of its dams in the Apalachicola-Chattahoochee-Flint Basin (ACF Ba-

sin). Florida contended that the Corps was adversely affecting threatened and endangered species by not allowing sufficient flow to cross the Georgia-Florida border into the Apalachicola River and that the Corps' operations were otherwise contrary to law. Florida's challenges were unsuccessful, and the litigation resulted in the Eleventh Circuit effectively requiring the Corps to undertake a study of the ACF Basin and update the decades-old Master Water Control Manual that specifies operating protocols for the Corps' ACF Basin projects. That process is actively underway. In completing that process, the Corps, exercising statutory authority delegated by Congress, will consider, among other things, effects on endangered and threatened species.

Florida, however, is not content to await the outcome of the Corps' deliberative process. Instead, it seeks to bypass that entire proceeding by asking this Court to engage in a common-law "equitable apportionment" of the States' rights to those waters. But Florida has brought its case against the wrong party, in the wrong court, and at the wrong time.

Florida attempts to plead around the role of the Corps, but the Corps is inescapably involved in any sensible adjudication of Florida's claims. No water enters the Apalachicola River from either the Chattahoochee or Flint River without passing through the Corps' Woodruff Dam, which is located at the Florida-Georgia border. Although the (unexplained) relief Florida requests is an order capping Georgia's consumptive water uses at the level existing on January 3, 1992, the injuries that Florida alleges—harm to threatened and endangered species and the oyster industry in the Apalachicola River and Bay—stem from purportedly inadequate minimum flows through Woodruff Dam during dry times.

The flow out of Woodruff Dam is precisely one of the issues that the Corps is examining even now in its revisions to its Master Manual. Determining flow rates involves the Corps' consideration of numerous technical issues, including the hydrology of the ACF Basin and potential impacts on the Apalachicola River and Bay, as well as the Fish and Wildlife Service's evaluation of any adverse impacts on federally protected and other species as part of the interagency consultation process required by the Endangered Species Act and the Fish and Wildlife Coordination Act. In submissions to the Corps, Florida has raised the very same contentions it raises here—that reduced flow into the Apalachicola is harming both protected species and the commercial oyster industry in the Apalachicola. Only after the Corps adopts a new Master Manual will it be possible to determine whether (1) the injuries that Florida seeks to prevent may actually come to pass, and (2) those injuries are caused by Georgia's water use.

An original action in this Court at this stage would disrupt that entire process and would proceed in a vacuum. Current flow conditions in the ACF Basin are a product of interim measures adopted by the Corps because of the practical constraints of years of litigation. No set of operations free from those artificial constraints will be established until the Corps completes its updated manual; any litigation before that process is complete—especially in this Court—makes little sense. Moreover, Florida's proposed complaint against Georgia ignores a key actor: The Corps is not a party, and Florida cannot make it a party unless the United States waives its sovereign immunity. Practical considerations, including the orderly resolution of disputes through customary procedures, strongly favor denial of Florida's motion for leave to file its complaint.

Florida's allegations of harm also have little claim to this Court's discretionary exercise of its original jurisdiction. As this Court has long held, that jurisdiction is extraordinary in nature and is to be exercised sparingly. A State must persuasively allege that it has suffered a "substantial injury," which must be proven by clear and convincing evidence. Florida's complaint gives barely a hint that its citizens are suffering any injury caused by a supposedly reduced flow into the Apalachicola—much less that any such injury is attributable to Georgia. Federal regulators have determined that the flow from Woodruff Dam does not jeopardize any federally protected species, and Florida has not pursued a challenge to that determination. Nor has Florida alleged any facts plausibly linking the sudden collapse of its oyster fishery in the 2012-2013 winter season to any action by Georgia; indeed, Florida has pointed only to other factors when raising the issue with other federal agencies.

At bottom, this is not a case that calls for this Court to exercise its extraordinary power to entertain a lawsuit between States. All of Florida's alleged harms concern the flow from dams operated by the Corps. The Corps is reexamining those operations, and its final conclusions can be challenged under the APA. Accordingly, this Court should deny Florida's motion for leave to file a bill of complaint.

STATEMENT

A. The ACF Basin

The ACF Basin encompasses a drainage area of roughly 19,800 square miles. *See* Army Corps of Engineers, *Final Updated Scoping Report: Environmental Impact Statement, Update of the Water Control Manu-*

al for the Apalachicola-Chattahoochee-Flint (ACF) River Basin, in Alabama, Florida, and Georgia 2 (Mar. 2013) (*Scoping Report*). Approximately 74% of that area is in Georgia and 15% is in Alabama; only 11% is in Florida. *Id.*; *see also* Fla. App. 1; App. 1a.

The Chattahoochee rises in northern Georgia and flows south through Georgia to the Florida border. Compl. ¶ 2.[1] Along the way, it passes Atlanta, where it serves as the primary source of water for 3.3 million people in the metropolitan region. Fla. App. 4. Further downstream, the Chattahoochee supports municipal, industrial, and agricultural needs in Georgia and Alabama all the way to the Florida state line.

The Chattahoochee is regulated by five federally owned dams operated by the Army Corps of Engineers. Compl. ¶ 22. Three of these dams—Buford, West Point, and Walter F. George—impound reservoirs that have substantial capacity to store water from the wet winter and early spring for release during the drier summer and fall. Because the Corps can store water in these reservoirs and choose the timing of releases, the Corps effectively controls how much water flows downstream from these dams at any time. The Corps' five dams are operated as "a unified whole" to serve several congressionally directed project objectives and other requirements of federal law. *Id.* For example, pending completion of the Master Manual, the Corps has determined to coordinate releases from its dams to maintain certain flows in the Apalachicola River for threatened and endangered species. App. 19a-23a.

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[1] A substantial portion of the Chattahoochee runs along the Georgia-Alabama border, but the river itself is in Georgia. *See Howard* v. *Ingersoll*, 54 U.S. (13 How.) 381, 388 (1852).

Buford Dam is the northernmost of the Corps' five dams and is located about 40 miles above Atlanta. The Corps has long operated Buford Dam to accommodate the Atlanta region's water supply needs, both by timing releases to provide sufficient flow for withdrawals downstream in Atlanta and by allowing withdrawals directly from the reservoir it impounds. *See In re MDL-1824 Tri-State Water Rights Litig.*, 644 F.3d 1160, 1171-1174 (11th Cir. 2011) (per curiam). Buford Dam has several authorized purposes besides water supply, including flood control, navigation, and the generation of hydroelectric power. *Id.* at 1200. The Corps manages the size and timing of releases from Buford Dam to accommodate these sometimes competing purposes.[2]

The Flint River also rises in northern Georgia. Essentially unregulated, it flows exclusively through Georgia, where it serves as a source of irrigation for southwestern Georgia's agricultural region, which annually generates two billion dollars in farm-based revenue. The Flint River joins the Chattahoochee just above the southernmost of the Corps' five projects, Woodruff Dam. Compl. ¶ 20; *see* App. 1a. The resulting reservoir spans the border between Georgia and Florida.

The Apalachicola River begins at Woodruff Dam and flows exclusively through the Florida panhandle, terminating at the Apalachicola Bay in the Gulf of Mexico. Compl. ¶ 20. No water flows into the Apalachicola from either the Chattahoochee or Flint River unless and until the Corps releases it from Woodruff Dam. Because Woodruff Dam does not have significant stor-

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[2] *See, e.g.*, Stockdale, *Memorandum for the Chief of Engineers re Authority to Provide for Municipal and Industrial Water Supply from the Buford Dam/Lake Lanier Project, Georgia* 27-28 (June 25, 2012) (Stockdale Mem.).

age capacity, the Corps regulates the flow into Florida by scheduling releases further upstream to ensure that the combined flows of the Flint and Chattahoochee meet certain minimums. Thus, although the federal government does not own the water in the ACF rivers, the operations of the Corps effectively regulate the amount of water that reaches Florida.

B. Prior Litigation

For more than two decades, Florida, Georgia, the Corps, and other parties were enmeshed in litigation over the Corps' dam operations in the ACF Basin. That litigation, which began in 1990 and concluded in 2013, ultimately encompassed seven different suits brought against the Corps under the APA. In 2007, the suits were consolidated by a multi-district litigation panel and assigned to a single judge in the Middle District of Florida (No. 07-md-1). The cases were then divided into two phases. Phase 1 concerned the extent to which the Corps has authority to operate Buford Dam to provide water supply to the Atlanta region. Phase 2 concerned whether the Corps' operations—and the resulting flows into the Apalachicola—complied with federal environmental statutes.

The Phase 1 litigation ultimately reached the Eleventh Circuit, which issued two significant rulings. First, it dismissed an APA challenge by Florida that the Corps had exceeded its congressionally delegated authority in providing water from Buford Dam to Atlanta. The court held that, although the Corps had provided water to Atlanta on an ad hoc basis, decades of litigation had prevented the Corps from taking final agency action to determine how it would balance the various project purposes of Buford Dam, including providing water to the Atlanta area. *Tri-State*, 644 F.3d at 1181-

1185. Accordingly, the court held that there was no jurisdiction under the APA to hear Florida's challenge.

Phase 1 also involved an APA challenge by Georgia to a decision by the Corps rejecting Georgia's request for a permanent allocation of storage at Buford Dam sufficient to meet future water needs. The Corps had concluded that it lacked statutory authority to grant that request, but the Eleventh Circuit agreed with Georgia that the Corps had understated the extent of its authority to provide water to metropolitan Atlanta. *Tri-State*, 644 F.3d at 1188-1189. The court further held, however, that it remained unclear whether the Corps had authority to grant Georgia's water supply request in its entirety and remanded the matter so that the Corps could reassess the scope of its authority. *Id.* at 1196-1197. The court stated that this remand analysis should be done in conjunction with "a comprehensive decision about the Corps' future water supply operations." *Id.* at 1197. Florida unsuccessfully sought this Court's review of the Eleventh Circuit's ruling. 133 S. Ct. 25 (2012).

The Eleventh Circuit's ruling effectively required the Corps to devise and implement a final plan for operating Buford Dam and to undertake a comprehensive review of its integrated operation of all the dams in the ACF Basin. As explained below (pp. 10-12, 20-23), that administrative review is underway.

Phase 2 of the multi-district litigation concerned whether the Corps' operations of the system—and in particular, the rate and timing of flows from Woodruff Dam—are sufficiently protective of threatened and endangered species in Florida. Because the lengthy litigation over the ACF Basin had prevented the Corps from adopting a final water control plan to govern the

operations of its dams and reservoirs, the Corps adopted a Revised Interim Operating Plan (RIOP) to address the needs of threatened and endangered species in the Apalachicola River and Bay pending development of a comprehensive Master Manual for the ACF reservoirs. This RIOP specified flow levels to be maintained at the Georgia-Florida border under various hydrological conditions. The Corps obtained a 2008 Biological Opinion (BiOp) from the Fish and Wildlife Service (FWS), which concluded that the RIOP would not jeopardize endangered or threatened species or adversely modify their critical habitat.[3] Florida challenged the RIOP and the 2008 BiOp, but the district court rejected Florida's challenge. *See* Order, Dkt. 376 (July 21, 2010).

Florida appealed, but during the pendency of the appeal, FWS issued a new, 2012 BiOp, which superseded the 2008 BiOp, while reaching fundamentally similar conclusions.[4] Specifically, the 2012 BiOp confirmed that the RIOP will not jeopardize over thirty federally listed species in the Apalachicola, including those that Florida's present complaint alleges are harmed by Georgia's water consumption. *See* App. 35a (proposed action "will not jeopardize the continued existence" or "destroy or adversely modify designated critical habi-

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[3] The 2008 BiOp was prepared during the interagency consultation process required by Section 7 of the Endangered Species Act, 16 U.S.C. § 1536.

[4] FWS prepared the 2012 BiOp to evaluate new information about the distribution of certain mussels that had not been considered in the 2008 BiOp. Florida cites the 2012 BiOp in its complaint (¶ 53). Pertinent parts of the 2012 BiOp are reprinted in the appendix to this brief (App. 2a-36a); it is available in full at http://www.fws.gov/southeast/news/2012/pdf/woodruffBOFinal.pdf.

tat" for the fat threeridge, purple bankclimber, and Chipola slabshell mussels); *see also* App. 8a-10a; Fla. Br. 16. Because the 2012 BiOp mooted Florida's challenge to the 2008 BiOp, Florida terminated its appeal from the district court's decision; that ruling was vacated and the Phase 2 litigation was dismissed as moot. Order, Dkt. No. 391 (Jan. 25, 2013). Florida has not sued to challenge the 2012 BiOp.

C. The Corps' Ongoing Efforts To Reexamine Its Operations In The ACF Basin

The pendency of the *Tri-State* litigation effectively stymied the Corps from fully reexamining its operations in the ACF Basin. The Corps' Master Manual for the ACF system was last formally updated in 1958; a revised manual was drafted in 1989 but never finalized because of litigation initiated by Florida and Alabama. With the impediment of that litigation removed, the Corps is consulting with federal resource agencies and preparing an Environmental Impact Statement on its operations so that it can adopt a new Master Manual that fully considers present hydrological and environmental conditions and balances the various authorized purposes of the ACF projects while complying with environmental laws. *See Scoping Report* 1; 33 C.F.R § 222.5(f)(1). The Corps expects to issue a new Master Manual for public comment by 2015.[5]

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[5] Corps regulations require "developing a water control plan for each reservoir project, as well as a basin Master Water Control Manual (Master Manual) for the coordinated operation of multiple projects within a river basin." *Scoping Report* 18. The Master Manual outlines in general terms how the particular projects are to be operated to accomplish various project purposes. *Id.* 17-18. As the Corps has explained, "[u]pdated Water Control Manuals are needed to enable managers to strike the best balance possible

Among the matters to be decided in the new Master Manual is the rate of water release to the Apalachicola River at the Georgia-Florida border under various hydrological conditions. *Scoping Report* 18. Under the Corps' current RIOP, the Corps maintains a minimum flow at the Florida-Georgia border and makes greater releases, depending on the hydrological conditions and other operational parameters, to benefit threatened and endangered species. App. 16a-23a. In the new Master Manual, the Corps will decide whether to maintain or modify these operating rules. Many potentially affected parties, including Florida, have made submissions to the Corps concerning the appropriate rate and timing of flows into the Apalachicola. Florida has once again contended that the Corps must revise those flows to ensure protection for endangered and threatened species, and has also argued that the Corps' current operations are providing insufficient fresh water for the oyster fishery in the lower Apalachicola, which Florida claims are being harmed by increased salinity levels.[6] Those submissions will be part of the administrative record for the Corps' ultimate decisions.

The Corps will also consider Georgia's water supply request, which was at issue in the Phase 1 litigation. On remand from the Eleventh Circuit, the Corps issued a legal opinion concluding that it has authority to grant

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for the many purposes and demands. A complex set of factors is needed to determine appropriate water management at each lake. In addition to the authorized project purposes, power contract commitments, hydrologic and climatologic factors, downstream lake and basin-wide conditions, potential threats of flood and drought, and lake levels must all be considered."

[6] *See* Florida Department of Environmental Protection, *Comments on ACF Master Water Control Manual* 11-12 (Jan. 14, 2013) (*Florida Comments*).

Georgia's water supply request in its entirety. *See* Stockdale Mem. 48 ("The Corps has the legal authority to accommodate Georgia's request[.]"). The Corps did not, however, decide whether it would grant Georgia's request. Rather, the Corps explained that "[f]urther study, including environmental analysis and consideration of public comments, would be required prior to any decision to actually exercise some or all of this authority." *Id.* The Corps also noted that it "is presently engaged in an effort to update the water control plans and manuals for the ACF Basin," and that its conclusions about the scope of its authority would be taken into account as it "continues with that necessary and important process." *Id.*

In 2013, Georgia updated its water supply request. Fla. App. 3. Although Georgia continued to request storage to meet the same level of water supply as before, it submitted additional supporting detail and revised projections in an affidavit by Judson Turner, Director of the Environmental Protection Division of Georgia's Department of Natural Resources.[7] This affidavit explained that by 2040 the Atlanta region anticipates needing to withdraw up to 705 million gallons per day (mgd) of water from Buford Dam's reservoir and the Chattahoochee River, but that 78% of that water (550 mgd) will be returned to the basin as highly treated wastewater, rendering it available for use downstream. *Id.* 15-16. At that point, metropolitan Atlanta's consumptive use of water from the Chattahoochee River will be "a mere 1.1%" of the average daily flow of the Apalachicola River just downstream of the state line. *Id.* 16. Annexed to Mr. Turner's affidavit was a

[7] Mr. Turner's affidavit also detailed the extensive water conservation measures Georgia has undertaken. Fla. App. 9-13.

technical analysis showing that "net water consumption associated with the municipal and industrial withdrawals contemplated in Georgia's water supply request is projected to have a minor impact on the flow in the Apalachicola River at the state line." *Id.* 25; *see also* App. 47a-51a, 56a-57a.

ARGUMENT

I. THIS COURT'S STANDARDS FOR EXERCISING ITS ORIGINAL JURISDICTION ARE STRINGENT

By invoking this Court's original jurisdiction, Florida asks the Court to "exert its extraordinary power to control the conduct of one State at the suit of another." *Connecticut* v. *Massachusetts*, 282 U.S. 660, 669 (1931). That is not a power this Court exerts lightly. To the contrary, the Court has consistently maintained that its "'original jurisdiction should be invoked sparingly,'" *Illinois* v. *City of Milwaukee*, 406 U.S. 91, 93 (1972), and that it will exercise that jurisdiction only in the "most serious of circumstances," *Nebraska* v. *Wyoming*, 515 U.S. 1, 8 (1995). As the Court has explained, its original "jurisdiction is of so delicate and grave a character that it was not contemplated that it would be exercised save when the necessity was absolute." *Louisiana* v. *Texas*, 176 U.S. 1, 15 (1900).

Thus, to justify exercise of this Court's original jurisdiction, a State must carry a burden significantly greater than that normally imposed in litigation between private plaintiffs. *See Alabama* v. *Arizona*, 291 U.S. 286, 292 (1934). Whereas district courts have a "virtually unflagging obligation ... to exercise the jurisdiction given them," *Colorado River Water Conservation Dist.* v. *United States*, 424 U.S. 800, 817 (1976), this Court exercises its original jurisdiction only "'sparingly,'" *South Carolina* v. *North Carolina*, 558 U.S.

256, 267 (2010) (quoting *Mississippi* v. *Louisiana*, 506 U.S. 73, 76 (1992)). The fact that a case falls within this Court's original jurisdiction does not mean that this Court should or will assume that jurisdiction. Rather, this Court exercises "substantial discretion to make case-by-case judgments as to the practical necessity of an original forum in this Court," *Texas* v. *New Mexico*, 462 U.S. 554, 570 (1983), "even as to actions between States where [its] jurisdiction is exclusive," *Wyoming* v. *Oklahoma*, 502 U.S. 437, 450 (1992). In the exercise of such discretion, this Court often denies motions for leave to file an original complaint.[8]

Several principles guide the Court's discretion in determining whether to grant leave to file a bill of complaint. As an initial matter, the Court is traditionally reluctant to grant such leave where the dispute and the relief requested may be intertwined with proceedings pending in another forum. *See, e.g.*, *Arizona* v. *New Mexico*, 425 U.S. 794, 797 (1976) (declining original jurisdiction in light of pending state-court action); *Washington* v. *General Motors Corp.*, 406 U.S. 109, 116 (1972) (declining original jurisdiction where dispute could be effectively resolved by federal district courts); *see also Illinois*, 406 U.S. at 93 (taking account of the "availability of another forum where there is jurisdiction over the named parties, where the issues tendered may be litigated, and where appropriate relief may be had").

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[8] *See, e.g.*, *Michigan* v. *Illinois*, 130 S. Ct. 2397 (2010); *Mississippi* v. *City of Memphis*, 559 U.S. 901 (2010); *Arkansas* v. *Oklahoma*, 546 U.S. 1166 (2006); *Arkansas* v. *Oklahoma*, 488 U.S. 1000 (1989); *South Dakota* v. *Nebraska*, 475 U.S. 1093 (1986); *United States* v. *Nevada*, 412 U.S. 534, 538-540 (1973) (per curiam).

Similarly, when deciding whether to entertain an original case, the Court has taken into account practical considerations of litigating the controversy, whether the Court may grant relief to the parties, and the alternative availability of adequate relief. For example, the Court has declined to exert jurisdiction where the United States is essential to a complete adjudication of the controversy but has not voluntarily become a party in this Court, *see Arizona* v. *California*, 298 U.S. 558, 568-572 (1936)—an even stronger consideration since the United States became subject to suit in district court under the APA. And the Court has declined to exercise jurisdiction where the controversy would inevitably involve complex technical questions that are properly within the province of expert federal agencies, and where challenges to those agencies' conclusions would be more suitable for litigation in a trial court. *See Ohio* v. *Wyandotte Chems. Corp.*, 401 U.S. 493, 503-505 (1971).

Finally, the Court is "traditional[ly] reluctan[t] to exercise original jurisdiction in any but the most serious of circumstances, even ... in cases between two or more States." *Nebraska*, 515 U.S. at 8. Thus, a complaining State must point to an injury of "'such seriousness that it would amount to *casus belli* if the States were fully sovereign.'" *Mississippi*, 506 U.S. at 77; *see also New York* v. *New Jersey*, 256 U.S. 296, 309 (1921) (requiring an "invasion of rights" of "serious magnitude" to warrant exercise of original jurisdiction). In the context of a common-law equitable-apportionment action, that at least requires a State to allege facts that, if proven, would amount to "clear and convincing evidence [of] some real and substantial injury or damage." *Idaho ex rel. Evans* v. *Oregon*, 462 U.S. 1017, 1027 (1983). Insubstantial or speculative harms will not suffice.

Establishing the "substantial injury" necessary for an equitable-apportionment case is a weighty matter. When one State seeks to enjoin water usage by another, "the burden on the complainant State of sustaining the allegations of its complaint is much greater than that imposed upon a complainant in an ordinary suit between private parties." *North Dakota* v. *Minnesota*, 263 U.S. 365, 374 (1923). And given the substantial costs to this Court and the parties of adjudicating such a case, the petitioning State's proposed complaint must persuasively make a case for exercise of that jurisdiction—surely more persuasive than the minimum in an ordinary civil case, wherein a party seeking relief must allege at least "sufficient factual matter" to "'state a claim to relief that is plausible on its face.'" *Ashcroft* v. *Iqbal*, 556 U.S. 662, 678 (2009).

II. Florida's Complaint Suffers From Severe Defects That Counsel Against Exercising Original Jurisdiction

Florida's proposed complaint falls well short of the demanding standard for exercise of this Court's original jurisdiction. Two interlocking flaws in that complaint demonstrate why the Court should decline jurisdiction. First, the source of Florida's alleged harm is inadequate flow at the state line; but whether the flow at the state line is inadequate cannot, as a practical matter, be meaningfully adjudicated unless and until the Corps establishes a final set of operating procedures for the ACF basin. That process will establish operating rules for water flows from Georgia into the Apalachicola, as well as other rules that will directly affect the flow at the state line. Once the Corps completes that task, then Florida, insofar as it is aggrieved by the Corps'

decisions, can seek to challenge those decisions in district court under the APA.

Second, Florida's extraordinarily weak complaint does not warrant this Court's discretionary exercise of jurisdiction. The allegations and materials relied upon by Florida fall far short of indicating imminent and substantial harm to Florida's sovereign rights. Florida mischaracterizes its own evidence about Georgia's consumption of water and wildly overstates the effect of that consumption on flow at the state line and any harm that might result from any slightly reduced flow. And Florida fails to acknowledge that most of its alleged harms have been extensively evaluated and rejected by expert federal agencies.

A. Florida's Suit Is At Best Premature

Florida's claim for equitable apportionment is essentially a claim about reduced flows into the Apalachicola out of the Corps' Woodruff Dam at the state line. The appropriate remedy for those reduced flows, Florida contends, is an order "capping Georgia's overall depletive water uses at the level then existing on January 3, 1992." Compl. 21. But that relief is disconnected from Florida's alleged injuries, which pertain only to flow at the state line, and Georgia cannot provide increased flow at the state line, at least not alone. It is the Corps that releases water from Georgia's Chattahoochee and Flint Rivers into the Apalachicola, through its management of Woodruff Dam (the spigot to the Apalachicola) and the integrated system of reservoirs upstream on the Chattahoochee.

Florida's allegations drive at the heart of the Corps' operation of that system. *See* Compl. ¶ 23 (acknowledging "[t]he Corps determines how much water

to release from its reservoirs" and that "less water reaches Florida due to ... the Corps' operational protocols"); *see also See In re MDL-1824 Tri-State Water Rights Litig.*, 644 F.3d 1160, 1200 (11th Cir. 2011) (per curiam). No water flows from Georgia into the Apalachicola unless and until the Corps releases it from Woodruff Dam. Thus, as a practical matter, the Corps must be involved in any adjudication of Florida's claim, since any resolution of that claim will need to be implemented by the Corps. *Cf. Arizona*, 298 U.S. at 571-572.[9]

Indeed, even if Georgia reduced its consumption significantly, Florida would not necessarily enjoy a corresponding increase in flow in the Apalachicola. Rather, the Corps could very well offset the impact of any change by Georgia. For instance, the RIOP specifies that during the droughts that are the focus of Florida's complaint, the Corps will release from upstream storage whatever water is necessary to maintain a 5,000 cubic-feet-per-second (cfs) minimum flow out of Woodruff Dam, but the Corps has not guaranteed any greater flow. *See* App. 4a-5a (describing the Corps' augmentation of flow). Thus, if Georgia reduced its consumption from either the Chattahoochee or the Flint, but the

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[9] A useful contrast can be drawn between this case and *Texas v. New Mexico*, No. 141, Orig., which is also pending before the Court. While both cases involve interstate disputes over water that is at times stored in federally operated reservoirs, in *Texas*, the United States plays a more ministerial role in managing a dam according to an allocation formula to which the States previously agreed, and the alleged harm is solely attributable to New Mexico's consumption downstream of the federal project. *See* U.S. Br. 5, 8. Here, by contrast, all of Georgia's withdrawals are upstream of Woodruff Dam, and the Corps' decisions about how to retain and release water at its projects throughout the Chattahoochee River to meet a variety of authorized project purposes directly affects flow at the state line.

Corps adhered to the same flow target, the effect of Georgia's reduction would not be higher flow for Florida, but rather higher levels in the Corps' upstream reservoirs (since the Corps would need to release less water to satisfy the minimum flow).

The Corps' operations and the water flow rate at the Georgia-Florida border are inextricably intertwined. The source of Florida's alleged harm (low flow rates during the dry season) directly implicates the Corps, and it would be wholly impractical to adjudicate Florida's claims without the active participation of the Corps, which is not a defendant to Florida's complaint and cannot be bound by the Court's decree unless it is a party. *See Arizona*, 298 U.S. at 572 (characterizing similar procedural posture as a disincentive "for this Court to decide the rights of the states which are before it by a decree which, because of the absence of the United States, could have no finality").[10]

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[10] During the dry season, when both Georgia's consumption and Florida's need for more water are allegedly greatest, natural flow into the ACF Basin for prolonged periods can be much less than the 5,000 cfs that the Corps regularly delivers to Florida from Woodruff Dam. The Corps is able to meet its 5,000 cfs target only by releasing large amounts of water from storage upstream. That would continue to be true even if Georgia significantly reduced its consumption. Thus, Georgia could not assure compliance with any decree based upon the 5,000 cfs or any other state-line flow requirement unless the decree had binding instructions for how the Corps would operate. But there is a substantial question whether the United States could participate in this original case as a full party and be bound by a decree of the Court. Florida cannot name the United States as a defendant in this Court because there is no waiver of sovereign immunity, at least pending completion of the Master Manual and Florida's assertion of a proper claim against the Corps under the APA. Given the numerous other practical impediments to this litigation and deficiencies in the proposed

And the time for Florida to challenge the Corps' management of its system of dams in Georgia is not ripe. For the first time in more than half a century, the Corps will adopt a revised Master Manual for all the federal projects in the ACF Basin. The Corps was previously unable to update its operations manual because it was hamstrung by decades of litigation over its operational authority in the ACF Basin. *Tri-State*, 644 F.3d at 1182 (noting that the Corps "has made sincere efforts to effectuate permanent water supply allocations but has been thwarted by the litigation process"). The Corps has now finally been liberated by the Eleventh Circuit to take final agency action implementing a comprehensive plan of operations for the five federal dams in the ACF Basin.

In its final version, the Corps' operating manual will specify the timing of releases from its dams under various climatic conditions and will directly affect the timing of water flow into the Apalachicola. To be sure, the Corps will not (and lacks authority to) adjudicate the issue of *ownership* of the water in the ACF Basin rivers; that water belongs to the States. But the manual will govern how the Corps manages water storage and releases from its dams for a variety of congressionally authorized purposes, including water supply, navigation, hydropower, and flood control.

In updating its Master Manual, the Corps will confront both Georgia's request that the Corps facilitate additional withdrawals at Buford Dam and from the Chattahoochee River,[11] and Florida's request that the Corps operate its projects to maintain higher flows in

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complaint, the Court may deny Florida leave to file and save this question for another day.

[11] *See* Compl. ¶ 45; Fla. App. 8; Stockdale Mem. 48.

the Apalachicola River.[12] Until the Corps' proceedings are completed, neither the parties nor the Court will know whether the flow rate the Corps sets at the Georgia-Florida border injures Florida. Indeed, Florida cannot even know at this time whether, or to what extent, it will be dissatisfied with the Corps' ultimate decisions. Without knowing what the Corps' baseline for flows will be, the parties cannot practically litigate, and the courts cannot meaningfully adjudicate, a federal common-law claim that Florida is receiving insufficient water at the state line. Were the case to go forward now, the entire focus of the litigation might change once the Corps finalizes its Master Manual (assuming the long-overdue updating process were not brought to a standstill).

The Corps, in updating its manual, must take account of numerous statutory directives and considerations governing the operation of these dams. Thus, the Corps must consider not only how to reconcile the various purposes Congress has specified for those dams (such as water supply, navigation, hydropower, and flood control), but also generally applicable statutes such as the National Environmental Policy Act, 42 U.S.C. §§ 4231 *et seq.*, the Endangered Species Act, 16 U.S.C. §§ 1531 *et seq.*, the Fish and Wildlife Coordination Act, 16 U.S.C. §§ 661 *et seq.*, the Water Supply Act of 1958, 43 U.S.C. § 390B, and the Water Resources Development Act, 33 U.S.C. § 2316, and its own regulations, *see* Army Corps of Engineers Reg. No. 1110-2-8154, § 6(b) (May 31, 1995) ("It is Corps policy to develop and implement a holistic, environmentally sound water quality management strategy for each project."). Thus, any contentions about equitable apportionment of

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[12] *See Florida Comments* 11-12.

the waters that flow through the Corps' projects cannot be evaluated in a vacuum, but must be considered against and in light of Congress's extensive legislation in this area—the interpretation and application of which falls in the first instance to federal agencies.

These federal agencies will necessarily evaluate the effect of Corps operations on the Apalachicola River, including its alleged injuries to wildlife caused by low flow. As an example, the FWS 2012 BiOp concluded that the Corps' current operations are not likely to adversely affect the Gulf Sturgeon or its eggs and "will not jeopardize the continued existence" of or "destroy or adversely modify designated critical habitat" for the fat threeridge, purple bankclimber, and Chipola slabshell mussels. *Compare* App. 8a-10a, 35a-36a, *with* Compl. ¶ 58 (alleged harm to mussels and sturgeon). As the Corps revises its Master Manual, it will again incorporate the interagency consultation process required by the Endangered Species Act, and any new information about the effect of the Corps' operations on protected species will be considered by both FWS and the Corps.

It would be counterproductive for a special master to begin amassing evidence about those same subjects at this time. The Corps should be free to devote its resources and attention to completing its current study without being diverted into litigation that will likely take years to complete. Worse still, if the special master were to take evidence without the active participation of the Corps and other agencies, the special master might well reach determinations that conflict with those of the Corps.

Once the Corps completes its updated Master Manual for the ACF Basin, then Florida—if aggrieved—may challenge the Corps' conclusions in fed-

eral district court. The APA would provide an avenue of judicial review if Florida believed that the operating procedures adopted by the Corps were arbitrary and capricious or otherwise contrary to law. Likewise, to the extent Florida disagrees with the FWS' conclusions about the effects of the Corps' operations on endangered species, it is also free to challenge those conclusions under the APA. *See Bennett* v. *Spear*, 520 U.S. 154, 177-178 (1997). But Florida has not challenged the FWS 2012 BiOp, and it voluntarily dismissed its suit challenging the 2008 BiOp when the 2012 BiOp was published.[13]

Given the pendency of the Corps proceedings, it is neither necessary nor appropriate for this Court to accept Florida's invitation to initiate an original equitable-apportionment action at this time. "Equitable apportionment is the doctrine of federal common law that governs disputes between states concerning their rights to use the water of an interstate stream." *Colorado* v. *New Mexico*, 459 U.S. 176, 183 (1982). Because the Corps is applying federal *statutory law* in its pending proceeding, that proceeding legally and logically takes precedence over a federal *common law* action.

As this Court has long recognized, "[t]here is no federal general common law," *Erie R.R. Co.* v. *Tompkins*, 304 U.S. 64, 78 (1938), and judge-made federal

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[13] Florida has an additional source of relief for economic harm caused by its oyster fishery failure. The Magnuson-Stevens Fishery Conservation and Management Act of 1976, as amended, empowers the Department of Commerce to declare a "commercial fishery failure" and to direct federal funds to help restore the fishery and "assist a fishing community affected by such failure." 16 U.S.C. § 1861a(a)(1), (2). As Florida admits, the Department took precisely that step in August 2013 with respect to the Apalachicola Bay oyster fishery. Fla. Br. 20.

common law—even in the context of disputes between States—is always "'subject to the paramount authority of Congress,'" *City of Milwaukee* v. *Illinois*, 451 U.S. 304, 313 (1981) (quoting *New Jersey* v. *New York*, 283 U.S. 336, 348 (1931)). This Court developed the common-law equitable-apportionment doctrine "to decide river controversies between States" in the absence of any relevant federal statutes. *Arizona* v. *California*, 373 U.S. 546, 565 (1963) (citing *Nebraska* v. *Wyoming*, 325 U.S. 589 (1945); *Wyoming* v. *Colorado*, 259 U.S. 419 (1922)). Since that doctrine was developed, Congress has enacted legislation extending federal regulation to many areas of our national life. As the scope of federal positive law has expanded over the years, it follows that the scope of federal common law has narrowed. *See, e.g.*, *Milwaukee*, 451 U.S. at 314 ("Federal common law is a 'necessary expedient,' and when Congress addresses a question previously governed by a decision rested on federal common law the need for such an unusual exercise of lawmaking by federal courts disappears." (citation omitted)).

Because the whole point of federal common law is to fill the interstices of federal statutory law, *see, e.g.*, *Milwaukee*, 451 U.S. at 312-317, there is no basis for applying federal common law to a dispute before the application of federal statutory law. Unless and until the Corps applies the relevant federal statutes here, this Court cannot know whether there remains an "'interstice' ... to be filled by federal common law." *Id.* at 323; *cf. Wyandotte Chems. Corp.*, 401 U.S. at 503, 505 (declining to exercise original jurisdiction where case presented problems that "many competent adjudicatory and conciliatory bodies are actively grappling with on a more practical basis" and would require "primarily skills of factfinding,

conciliation, detailed coordination with—and perhaps not infrequent deference to—other adjudicatory bodies").

There is no basis for applying federal common law to address alleged injuries that fall within the broad scope of the thicket of federal environmental and natural resource statutes, and certainly not before those statutes have been applied, Florida has determined that they fail to address its alleged injuries, and an APA action has been unsuccessful. Then, and only then—after the application of the relevant federal statutes and the subsequent determination whether Florida is injured—will it be possible to determine whether there remains any common law claim at all for whatever particular injury is left.[14]

B. Florida Has Not Alleged Any Injury Sufficient To Warrant This Court's Exercise Of Its Original Jurisdiction

Coupled with the above practical impediments are the legally insufficient allegations in Florida's complaint, which also make this case unsuitable for exercise of the Court's original jurisdiction. The complaint fails to make out a plausible case that Georgia's consumption is causing significantly reduced flows at the state line,

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[14] Although Georgia has previously suggested that Florida might be entitled to bring an equitable apportionment action in this Court at some point (see Opp. 32-33 & n.10, *Florida* v. *Georgia*, Nos. 11-999, -1006, -1007 (U.S. May 25, 2012)), Georgia has never suggested that Florida could bring—before the conclusion of the ongoing Corps proceeding—such an action to redress alleged injuries potentially within the scope of the federal legislation the Corps is applying, see, e.g., *Arizona*, 373 U.S. at 565 (declining to apply equitable-apportionment doctrine in light of relevant federal statutes).

and it also fails to tie Florida's alleged injury to such reduced flows.

Florida's allegations about water consumption by Georgia are not only flawed, but also mischaracterize the source documents on which they rely. Florida relies heavily on highly selective citations to the documents incorporated by reference into its complaint. In particular, Florida attaches and relies on the affidavit submitted by Judson Turner in support of Georgia's revised 2013 water supply request to the Corps as supposedly establishing that metropolitan Atlanta currently withdraws 360 mgd from the Chattahoochee.[15] Compl. ¶ 45 (citing Fla. App. 7). But Florida neglects to mention that the same affidavit establishes that roughly 70% of this water is *returned* to the Chattahoochee and is available for downstream uses. *See* Fla. App. 15 (describing how in 2011, roughly 219 mgd were returned to the river); *see also* App. 41a-42a (showing that, in addition to the 219 mgd returned to the Chattahoochee, Georgia returns 38 mgd to Lake Lanier itself).[16] Thus, according to the documents on which Florida itself relies, metropolitan Atlanta's net consumption stands at roughly 0.8% of the entire annual average daily flow of Florida's Apalachicola River. App. 41a-42a; Fla. App. 16.

Likewise, Florida's claims based on Georgia's projected future use are incomplete and misleading. Florida notes that Georgia has requested that the Corps

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[15] One million gallons per day is approximately equal to a flow of 1.55 cfs.

[16] Florida has submitted Mr. Turner's affidavit but not its supporting exhibits. The cited document is Exhibit 4 to the Turner affidavit and is referenced at page 6 of Florida's appendix.

make available storage in Lake Lanier sufficient to support 705 mgd of gross withdrawals for the metropolitan Atlanta region by the year 2040.[17] Compl. ¶ 45. But Mr. Turner's affidavit explains that Georgia expects to return 78% of these withdrawals (or 550 mgd) back to the river if the Corps grants Georgia's request. Fla. App. 16. This total net withdrawal of 155 mgd will constitute a mere 1.1% of average daily flow at the Florida-Georgia border. *Id.* As a technical exhibit to the Turner affidavit shows (App. 47a-51a, 56a-57a), "Georgia's water supply request is projected to have a minor impact on the flow in the Apalachicola River at the state line" (Fla. App. 25).

To be sure, severe droughts will reduce the flow of water available to Florida. But those natural droughts reduce Georgia's access to water as well, and nothing in Florida's complaint suggests that Georgia consumes more than its fair share of water during these droughts—particularly given that Florida comprises only 11% of the drainage area of the ACF Basin, while Georgia comprises approximately 74%. *See supra* p. 5. Moreover, the Corps presently augments flows to en-

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[17] To the extent Florida alleges separate harms from Georgia's consumption that may occur in 2040, those are too remote in time to justify this Court's intervention now. *See Alabama*, 291 U.S. at 292 (alleged harm must be "imminent" to warrant exercise of original jurisdiction). The Corps has not yet even decided whether to grant Georgia's water supply request for 2040, and if it does, that decision would be subject to judicial review under the APA, to the extent embodied in a final agency action and challenged by a party with standing. But at this stage, any allegations of harm from projected water use twenty-six years in the future are too speculative to warrant this Court's intervention. *See Connecticut*, 282 U.S. at 674 (injunction "will not be granted against something merely feared as liable to occur at some indefinite time in the future").

sure that Florida receives a minimum flow of 5,000 cfs at the state line to minimize any adverse effects to federally listed species in the Apalachicola. *See* App. 16a-23a (detailing schedule of releases). When net basin inflows fall below 5,000 cfs, the Corps supplements them by releasing water stored in the Corps' upstream reservoirs at Buford, West Point, and Walter F. George Dams. *Id.* 16a. The Corps releases higher flows to benefit threatened and endangered species at other times, and the flow out of Woodruff Dam historically is well in excess of the 5,000 cfs minimum. *Id.* 27a (flows below 5,050 cfs occurred on 0.9% of observed days from 1975-2008).

But even if Florida's claims of reduced flows into the Apalachicola River are accepted, Florida still has not plausibly alleged that those reduced flows cause any significant harm. Notably, Florida does not claim that its citizens are being deprived of water for drinking, domestic, agricultural, or other consumptive uses. *Cf. Tri-State*, 644 F.3d at 1190 (noting that metropolitan Atlanta uses the Chattahoochee River for drinking, municipal, and industrial purposes). Instead, Florida asserts that Georgia's consumption has "diminish[ed] the likelihood" that certain endangered and threatened "species will survive." Compl. ¶ 59. But the document Florida cites as support, the 2012 BiOp (*id.* ¶ 53), finds that the Corps' current operations are *not* likely to jeopardize the three listed mussel species in the Apalachicola on which Florida focuses or the rest of the more than thirty other listed species considered. App. 8a-10a, 35a-36a.

Florida also alleges that low flows have caused commercial harm to its oyster fishery in the Apalachicola (which does not involve threatened or endangered species). But Florida fails to allege any plausible connection between Georgia's water consumption and the

"collapse of the Apalachicola Bay oyster fishery." Compl. ¶ 54. Tellingly, the complaint does not allege that Apalachicola oyster landings have gradually diminished over time in proportion to Georgia's alleged increase in water consumption. To the contrary, the complaint alleges that oyster landings precipitously dropped by "62.3 percent" during the 2012-2013 winter season. *Id.* ¶ 56. That sudden and recent shock to oyster landings is completely disconnected from Florida's allegation that Georgia caused that harm by gradually increasing its consumptive uses since January 3, 1992. Compounding this problem, Florida fails to explain why its arbitrary request to cap Georgia's consumption at January 3, 1992 levels in any way corresponds to or effectively remedies a collapse in Florida's oyster fishery that occurred more than twenty years later. Compl. 21.[18]

Florida's elected officials have themselves attributed the 2012-2013 decline to far more plausible causes, which Florida's complaint summarily discounts. *See, e.g.*, Compl. ¶ 44 (asserting that "[c]hanging climatic conditions cannot ... explain reductions in inflows to the Apalachicola River"). In the midst of Florida's oyster troubles in 2012, Governor Rick Scott sought and received a declaration of a commercial fishery failure from the Department of Commerce. *Id.* ¶ 56. Governor

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[18] Florida's allegations of increased salinity in Apalachicola Bay (Compl. ¶ 56) are similarly deficient. As Florida itself has recognized, the Bay's salinity levels are affected by myriad factors other than Georgia's consumption, including "[r]iver flow, local rainfall, wind speed and direction, tidal currents, and basin configuration," which have different levels of importance in different portions of the Bay. Edmiston, Florida Department of Environmental Protection & National Oceanic and Atmospheric Administration, *A River Meets the Bay: The Apalachicola Estuarine System* 19 (Dec. 2008).

Scott's letter was drafted outside the context of litigation and candidly attributed reduced oyster harvests to two factors: (1) the "Apalachicola, Flint, and Chattahoochee Rivers, have experienced drought conditions for several years;" and (2) "overharvesting of illegal and sub-legal oysters" in response to the suspension of oyster harvesting in contiguous states (as a result of the Deepwater Horizon oil spill) have led to fewer oyster landings. App. 59a; *see also id.* 76a-77a.

Governor Scott nowhere suggested in that letter that the difficulties in Florida's oyster industry could be traced to Georgia's alleged overconsumption of water. And Florida's own Fish and Wildlife Conservation Commission concluded that years of drought have contributed to Florida's oyster fishery troubles not just in Apalachicola Bay, but across eight counties along Florida's Gulf Coast. Sempsrott et al., Florida Fish and Wildlife Conservation Commission, *Apalachicola Bay Issues—Oysters: Review and Discussion* 5-6 (Oct. 22, 2012).

Florida's attempts to attribute the 2012-2013 low oyster harvest to Georgia's upstream water usage do not even cross "'the line between possibility and plausibility'" necessary for an ordinary complaint filed in district court, *see Iqbal*, 556 U.S. at 678—much less the far more demanding standard that this Court has established for commencement of an original case. In light of the significant costs that accompany this Court's extraordinary exercise of original jurisdiction and the Court's important gatekeeping function at this stage, Florida must allege a theory of liability that goes well beyond mere "conceivab[ility]." *Bell Atl. Corp.* v. *Twombly*, 550 U.S. 544, 570 (2007). Florida's allegations do not come close; to the extent they are not refuted by Florida's own submission, they are plainly "in line with a

wide swath of" other, more probable factors contributing to any declining flow in the Apalachicola River, *cf. id.* at 554, such as the recent overharvesting of oysters and exceptional droughts that have struck the ACF Basin.

In sum, Florida has not pleaded facts plausibly suggesting that it will be able to establish clear and convincing evidence that it suffers substantial injury as a result of Georgia's consumption of water.[19] *See Idaho ex rel. Evans*, 462 U.S. at 1027 ("A State seeking equitable apportionment under our original jurisdiction must prove by clear and convincing evidence some real and substantial injury or damage."); *Alabama*, 291 U.S. at 291 (allegations must be "clearly sufficient to call for a decree in [plaintiff State's] favor"). The Court should therefore deny Florida leave to file its complaint.[20]

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[19] The insubstantiality of Florida's allegations is particularly apparent when considered in light of the socially beneficial uses to which Georgia has put the Chattahoochee and Flint Rivers—supporting a major American metropolis and a thriving agricultural region. *See Colorado* v. *New Mexico*, 459 U.S. 176, 187 (1982) (recognizing that "the equities supporting the protection of existing economies will usually be compelling"); *cf. Connecticut*, 282 U.S. at 673 ("Drinking and other domestic purposes are the highest uses of water.").

[20] At a minimum, the Court should allow Georgia to file a prompt motion to dismiss the complaint and entertain full briefing and argument on that motion, without referring the case to a special master. *See Texas*, 2014 WL 273246 (U.S. Jan. 27, 2014); *see also Idaho ex rel. Andrus* v. *Oregon*, 429 U.S. 163, 164 (1976) (per curiam) (grant of leave to file "is not a judgment that the bill of complaint ... states a claim upon which relief may be granted"). As noted above, there is substantial reason to doubt that Florida's proposed complaint sets forth a basis for this Court to grant relief. First, the relief Florida has requested—consumption caps on Georgia—would not necessarily remedy the harm Florida has alleged. Second, it is questionable whether this Court can effectively grant Florida alternative relief (that Florida has not requested) regarding state-line flows,

CONCLUSION

Florida's motion for leave to file a bill of complaint should be denied.

Respectfully submitted.

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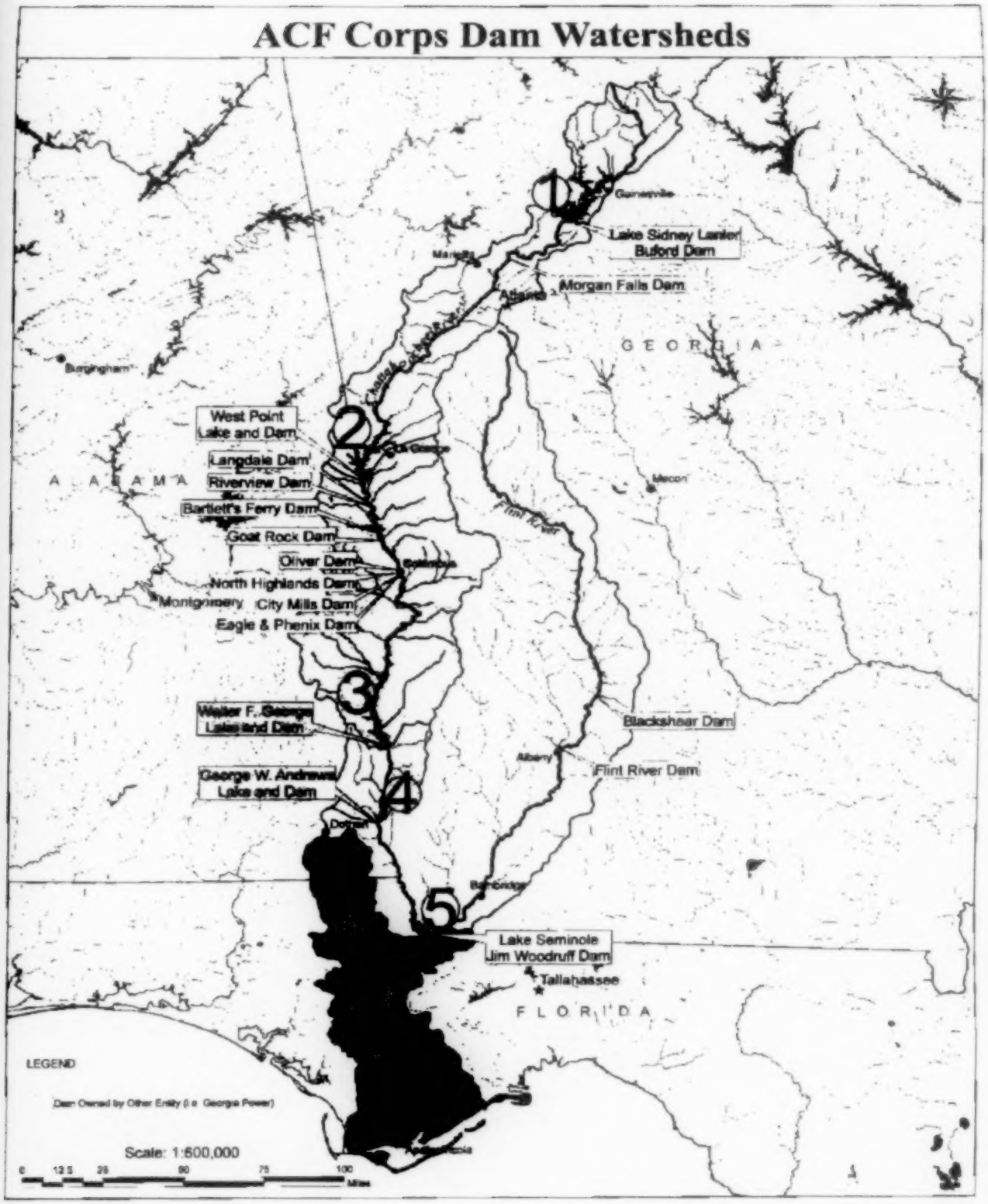
when that remedy requires implementation by the Corps but the Corps is not a party to this action. Third, the complaint does not adequately allege a substantial injury caused by Georgia that warrants resolution through an extraordinary equitable-apportionment action. If the complaint is deficient on these or other grounds, then the case should not proceed past the pleading stage.


ACF Corps Dam Watersheds
Lake Sidney Lanier
Buford Dam
Morgan Falls Dam
GEORGIA
West Point
Lake and Dam
Langdale Dam
Riverview Dam
Bartlett's Ferry Dam
Goat Rock Dam
Oliver Dam
North Highlands Dam
City Mills Dam
Eagle & Phenix Dam
Walter F. George
Lake and Dam
George W. Andrews
Lake and Dam
Blackshear Dam
Flint River Dam
Lake Seminole
Jim Woodruff Dam
Tallahassee
FLORIDA
ALABAMA
Flint River
LEGEND
Dam Owned by Other Entity (i.e. Georgia Power)
Scale: 1:600,000
0 12.5 25 50 75 100
Miles

BIOLOGICAL OPINION ON THE U.S. ARMY CORPS OF ENGINEERS, MOBILE DISTRICT, REVISED INTERIM OPERATING PLAN FOR JIM WOODRUFF DAM AND THE ASSOCIATED RELEASES TO THE APALACHICOLA RIVER

Prepared by:
U.S. Fish and Wildlife Service
Panama City Field Office, Florida
May 22, 2012

EXECUTIVE SUMMARY

The action evaluated in this consultation is the Corps' Revised Interim Operating Plan (RIOP) for Jim Woodruff Dam, which describes releases from the dam to the Apalachicola River. Consultation on the RIOP was completed in 2008 and reinitiated in 2010, because of new information on the distribution and mortality of fat threeridge mussels. Substantial numbers of fat threeridge mussels recolonized habitats at elevations above the minimum 5,000 cfs flow, and many were subsequently exposed and killed when flows declined in September 2010. The Corps determined that the proposed RIOP may adversely affect the fat threeridge, purple bankclimber, and Chipola slabshell, and may affect but would not likely adversely affect (NLAA) the Gulf sturgeon or designated Gulf sturgeon or mussel critical habitat. The Service concurred with the Corps' determination of NLAA for the Gulf sturgeon and its designated critical habitat. Mussel effects were addressed in this biological opinion (BO).

The current version of the RIOP is very similar to the 2008 RIOP. It does not address operational specifics at the four federal reservoirs upstream of Woodruff. The

RIOP addresses two specific parameters of the daily releases from Woodruff Dam into the Apalachicola River: a minimum discharge in relation to average basin inflows (i.e., the actual amount of water flowing into all of the Corps projects during a given time period) and maximum fall rate (vertical drop in river stage per day). These two parameters vary by basin inflow, composite conservation storage level and by month. Except when basin inflow is less than 5,000 cfs and during some down-ramping periods, the minimum releases are not required to exceed basin inflow. The Corps proposed five modifications to the 2008 RIOP to minimize impacts to listed species: 1) volumetric balancing is eliminated; 2) minimum flow releases will match basin inflow between 5,000 and 10,000 cubic feet per second (cfs) from June through November (except during drought contingency operations); 3) drought contingency operations are not suspended until composite conservation storage has recovered above Zone 2 into Zone 1; 4) when releases are less than 10,000 cfs, the maximum fall rate is limited to 0.25 ft/day; and 5) river stage declines of 8 feet or more will not occur in less than 14 days when river flows are less than 40,000 cfs during the spawning season (March-May) under both normal and drought operations.

The current status of the three mussel species and their critical habitat is discussed in detail in the BO. Notable mortality of the purple bankclimber and fat threeridge has occurred during recent droughts in 2006-2008 and 2010-2012, but no Chipola slabshell mortality has been observed. The Chipola slabshell population is stable but generally occurs in relatively low abundance. The purple bankclimber is rare and occurs at low abundance in the Apalachicola River (with the exception of one location), and it appears to be experiencing poor recruit-

ment. The fat threeridge population appears stable and may be increasing in size. They are abundant in the middle reach of the Apalachicola River and the lower Chipola River, the population is relatively large, and there is evidence of recruitment.

Fat threeridge are likely moving in response to changing water levels to maintain an optimal depth or associated habitat parameter. At the time of the 2008 BO there were no listed mussels at river stages greater than 5,000 cfs due to the drought of 2006-2008. Although we noted that take may occur when individuals occupy stages greater than 5,000 cfs, we did not anticipate take under this scenario because it was considered an anomaly related to very high flows in 2005. However, based on recent data, it appears that fat threeridge readily recolonize higher bank elevations at flows greater than 5,000 cfs, where they could be at risk of stranding and mortality when flows decline. Mortality during these events was highest in the middle reach of the Apalachicola River where the main channel populations are the most abundant and slopes are shallow. Some mortality occurred in the Chipola River, but it appears to be limited. Mortality estimates from all of these events range from <1% to 2% depending on preceding hydrologic conditions, fall rates, habitat condition, and the size of the population in Swift Slough and unsurveyed deep-water habitats.

Relative to the Baseline period (1975-2008), the proposed RIOP provides both beneficial and adverse effects to the species and designated critical habitats we have assessed. Many of these effects derive from relatively minor differences between the RIOP and Baseline; however, we attribute these differences to changes in reservoir operations and not consumptive water use. Generally, it appears that the Corps would store water

more often and augment flows less often under the RIOP than has occurred historically. The RIOP uses some of this stored water to augment basin inflow in order to maintain a minimum flow of 5,000 cfs, but the frequency and duration of flows less than 10,000 cfs is increased.

Lower flows for longer durations will negatively impact all three mussel species. We expect impacts to Chipola slabshell to be minimal because it occurs almost entirely within the Chipola River where movement is facilitated by higher bank slopes and the species' probable tendency to move. Impacts to the purple bankclimber will also likely be minimized because this species appears to occur more often in deeper portions of the stream channel, which is likely why we have observed limited mortality during recent low flows. The results of the fat threeridge population viability analysis (PVA) indicate that the population can sustain reductions of 1-2% (estimated have occurred during recent droughts) if flows are reduced to 5,000 cfs and 4,500 cfs with currently projected probabilities. However, the PVA also indicates that increasing the frequency of such events results in a greater impact to population viability. The RIOP may affect three of the five primary constituent elements (PCEs) of mussel critical habitat: 1) permanently flowing water; 2) water quality; and 3) fish hosts. It does not appear to reduce the amount of important floodplain habitat available to fish hosts. Droughts substantially change the nature of all of these PCEs, but the RIOP would not appreciably change the quantity or quality of the PCEs to the extent that it would appreciably diminish the habitat's capability to provide the intended conservation role. Therefore, it is the Service's biological opinion that the proposed action: 1) will not jeopardize the continued existence of

the fat threeridge, purple bankclimber, and Chipola slabshell; and 2) will not destroy or adversely modify designated critical habitat for the fat threeridge, purple bankclimber, and Chipola slabshell.

The Incidental Take Statement issued exempts the Corps from "take" under the Endangered Species Act. During each of these events (flow reduction to 4,500 cfs, and exposure at stages >5,000 cfs following recolonization), a maximum the following may be exposed: 30 purple bankclimbers (60 total); three Chipola slabshell (six total); and 9,150 fat threeridge (18,300 total). Three mandatory reasonable and prudent measures are also included: 1) adaptive management; 2) maintenance of the Chattahoochee gage; and 3) monitoring.

This BO is effective for five years (May 22, 2017). No further consultation is needed unless the Corps operates Woodruff Dam in a way that is different from the RIOP, new information indicates that the RIOP may affect listed species to an extent not considered in the BO, or if more mussels or Gulf sturgeon are "taken" under the Corps' operations than anticipated.

* * *

[U.S. Department of the Interior letterhead]

May 22, 2012

Mr. Curtis Flakes
Chief, Planning and Environmental Division
U.S. Army Corps of Engineers
P.O. Box 2288
Mobile, Alabama 36628-0001

Dear Mr. Flakes:

This document is the Fish and Wildlife Service's (Service) biological opinion (BO) of the Revised Interim Operating Plan (RIOP) for Jim Woodruff Dam. The RIOP addresses water management operations at Jim Woodruff Dam and the associated releases to the Apalachicola River. This opinion is provided in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*) and provides considerations for provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*).

The U.S. Army Corps of Engineers (Corps) originally requested formal consultation on this action by letter dated April 15, 2008. At that time, the Corps determined that the RIOP may adversely affect the threatened Gulf sturgeon (*Acipenser oxyrinchus desotoi*), endangered fat threeridge mussel (*Amblema neislerii*), threatened purple bankclimber mussel (*Elliptoideus sloatianus*), threatened Chipola slabshell (*Elliptio chipolaensis*), and areas designated as critical habitat for the Gulf sturgeon and these mussels. In the June 1, 2008 BO, the Service determined that the RIOP would not jeopardize the continued existence of these species nor destroy or adversely modify their designated criti-

cal habitats. An Incidental Take Statement (ITS) and Reasonable and Prudent Measures (RPMs) were issued to minimize the impacts of incidental take on these species.

Consultation was reinitiated by letter dated November 17, 2010, because of new information on the distribution and mortality of fat threeridge mussels. Substantial numbers of fat threeridge mussels recolonized habitats at elevations above the minimum 5,000 cfs flow, and many were subsequently exposed and killed when flows declined in September 2010. Since that time, we have worked with your staff on potential modifications to the RIOP to minimize impacts to fat threeridge mussels (Corps 2011 and 2012). As described in your most recent amended biological assessment (BA), the Corps is proposing to adopt some of these modifications (Corps 2012). The Corps has determined that the proposed RIOP may adversely affect the fat threeridge, purple bankclimber, and Chipola slabshell, and may affect but would not likely adversely affect (NLAA) the Gulf sturgeon or designated Gulf sturgeon or mussel critical habitat.

Based on the information you provided in the 2012 BA and your supplementary letter on April 12, 2012, the Service concurs with the Corps' determination of NLAA for the Gulf sturgeon and its designated critical habitat. We do not expect take of Gulf sturgeon eggs and larvae to occur because the RIOP's fall rate provision prevents river stage declines of 8 feet or more in less than 14 days, which were expected to result in take in the 2008 BO. In addition, there is little, if any, change to the available amount of spawning habitat in the spring or fall or juvenile sturgeon habitat (using the surrogate measure for salinity in the bay of consecutive days with flows less than 16,000 cfs). The RIOP may

benefit spawning and juvenile habitat relative to the environmental baseline period (1975-2008) by generally providing: 1) more 30 day-continuous habitat in the known spawning depth range, and 2) a slight reduction in the maximum number of consecutive days of flows less than 16,000 cfs during October through March when Gulf sturgeon are using the bay, which may be associated with lower salinities preferred by juveniles. No further impacts to Gulf sturgeon resulting from the RIOP have been identified. Therefore, we will not discuss Gulf sturgeon further in this BO.

A total of 34 federally listed species are known to occur within the Apalachicola-Chattahoochee-Flint (ACF) River Basin, but effects of the proposed action are limited to those that depend primarily on riverine habitat. Except for the temporary waiver of winter drawdown requirements during drought conditions, the Corps would implement the RIOP within the constraints of the existing water control plans for the upstream reservoir projects, i.e., the RIOP would not change the top of the flood control pools, conservation pools, or the rule curves of the upstream projects. Therefore, the proposed action will have no effect or an insignificant effect (*i.e.*, any impacts should never reach the scale where take occurs) on all but the riverine- and estuarine-dependent species. Two species of sea turtles and the West Indian manatee may sometimes occur in Apalachicola Bay or the lower Apalachicola River; however, any effects of the proposed action to these species would be insignificant also, due to their low numbers and only occasional seasonal residence in the river and bay. Three of the 34 ACF listed species are freshwater mussels that do not occur in areas downstream of the Corps' ACF projects: the shiny-rayed pocketbook, Gulf moccasinshell, and oval pigtoe. The proposed action will

have no effect on these mussel species. Altogether, the proposed action will have either no effect or an insignificant effect on the species listed below; therefore, these species are not further discussed in this BO. No further consultation is necessary for these species unless the RIOP is subsequently modified in a manner that causes an effect to listed species or designated critical habitat or new information reveals the RIOP may affect listed species or designated critical habitat in a manner or to an extent not previously considered.

Frosted flatwoods salamander (*Ambystoma cingulatum*)
Reticulated flatwoods salamander (*Ambystoma bishopi*)
Loggerhead turtle (*Caretta caretta caretta*)
Eastern indigo snake (*Drymarchon corais couperi*)
Atlantic ridley (*Lepidochelys kempi*)
Piping plover (*Charadrius melodus*)
Wood stork (*Mycteria americana*)
Gray bat (*Myotis grisescens*)
Indiana bat (*Myotis sodalis*)
West Indian manatee (*Trichechus manatus*)
Shiny-rayed pocketbook (*Lampsilis subangulata*)
Gulf moccasinshell (*Medionidus penicillatus*)
Oval pigtoe (*Pleurobema pyriforme*)
Little amphianthus (*Amphianthus pusillus*)
Apalachicola rosemary (*Conradina glabra*)
Telephus spurge (*Euphorbia telephioides*)
Harper's beauty (*Harperocallis flava*)
Black-spored quillwort (*Isoetes melanospora*)
Pondberry (*Lindera melissifolia*)
White birds-in-a-nest (*Macbridea alba*)
Canby's dropwort (*Oxypolis canbyi*)
Godfrey's butterwort (*Pinguicula ionantha*)
Harperella (*Ptilimnium nodosum*)

Chapman's rhododendron (*Rhododendron chapmanii*)
Michaux's sumac (*Rhus michauxii*)
Green pitcherplant (*Sarracenia oreophila*)
American chaffseed (*Schwalbea Americana*)
Florida skullcap (*Scutellaria floridana*)
Fringed campion (*Silene polypetala*)
Gentian pinkroot (*Spigelia gentianoides*)
Cooley meadowrue (*Thalictrum cooleyi*)
Florida torreya (*Torreya taxifolia*)
Relict trillium (*Trillium reliquum*)
Gulf sturgeon (*Acipenser oxyrinchus desotoi*)

The RIOP is intended to govern the releases from Woodruff Dam until revised or replaced with a new Water Control Plan (WCP). The Corps will prepare a draft environmental impact statement for updated water control manuals for the ACF River Basin. We understand that the revision of the WCP may take up to five additional years; therefore, we have structured this opinion to evaluate the effects of the proposed action over the next five years.

This BO is based on numerous coordination meetings, clarifying letters, and conference calls between the Corps and the Service in recent months, as well as unpublished data in Service files, the experience of Service biologists, and an extensive literature search. It does not rely on the regulatory definition of destruction or adverse modification of critical habitat as set forth in the Code of Federal Regulations at 50 CFR § 402.02. Instead, we have relied upon the statutory provisions of the Act to complete the following analysis with respect to critical habitat. A complete administrative record is on file in the Panama City Field Office, Florida.

* * *

BIOLOGICAL OPINION

This opinion supersedes the 2008 BO dated June 1, 2008, which addressed the effects of the Revised Interim Operating Plan (RIOP), because the 2008 RIOP has been amended during reinitiation of consultation. The Corps has described changes to the RIOP and its effects in the revised amended BA dated February 15, 2012. Where appropriate, we have incorporated their descriptions and analysis into this BO. This document also supersedes the 2008 ITS and associated RPMs.

1 DESCRIPTION OF PROPOSED ACTION

The action evaluated in this consultation is the Corps' RIOP for Jim Woodruff Dam, which describes releases from the dam to the Apalachicola River. The RIOP and modifications were formulated to address protection of endangered and threatened species and critical habitat in the Apalachicola River, manage reservoir storage for other project purposes, and meet drought-related contingencies. According to the Corps, the RIOP is not a new WCP for Woodruff Dam; it is a definition of ACF operations that is within the limits established by the existing ACF WCP except during defined drought conditions. It is our understanding that the RIOP is effective until it is revised or until the ACF WCP is formally updated, at which time the Corps would reinitiate consultation.

The Corps operates five dams in the ACF River Basin: (in downstream order) Buford, West Point, Walter F. George, George W. Andrews, and Jim Woodruff (Figure 1.A). All are located wholly on the Chattahoochee River arm of the basin except the downstream-most dam, Woodruff, which is located at the confluence of the Chattahoochee and Flint rivers and marks the up-

stream extent of the Apalachicola River. Andrews is a lock and dam without any appreciable water storage, and Lake Seminole has very limited storage capacity. Both are essentially operated as run-of-river reservoirs (i.e., what goes in comes out without being stored for any substantial amount of time). The impoundments of Buford, West Point, and Walter F. George dams, however, provide for combined conservation storage of approximately 1.6 million acre-feet, relative to the top of each reservoir's full summer pool and the bottom of the conservation pool, which is potentially available to support water management operations. For about half of its length, the Chattahoochee River forms the boundary between Georgia and Alabama. Lake Seminole straddles the boundary between Florida and the southwest corner of Georgia.

The Corps operates the ACF reservoirs as a system, and releases from Woodruff Dam reflect the downstream end-result of system-wide operations. The RIOP addresses specific parameters of the daily releases from Woodruff Dam into the Apalachicola River. The RIOP does not address operational specifics at the four federal reservoirs upstream of Woodruff or all aspects of the operations at Woodruff, other than to anticipate waivers from the winter pool rule curves at West Point and Walter F. George reservoirs during exceptional drought conditions. The RIOP specifies two parameters applicable to the daily releases from Woodruff: a minimum discharge in relation to average basin inflows (see definition below) and maximum fall rate (vertical drop in river stage [ft/day]). For purposes of this BO, we use data for both parameters that are collected by the USGS at gage number 02358000, "Apalachicola River at Chattahoochee, FL," which is located 0.6 mi downstream of Woodruff Dam. We refer to this

flow measurement point throughout the BO simply as the "Chattahoochee gage".

Basin inflow is defined as the amount of water that would flow by Woodruff Dam during a given time period if all of the Corps' reservoirs maintained a constant water surface elevation during that period. The Corps estimates basin inflow daily from a combination of river and reservoir level measurements, mathematical stage/volume/discharge relationships, and operating characteristics of the various water release structures of the dams. The RIOP uses a 7-day moving average of daily basin inflow calculations for daily release decisions. Basin inflow is not the natural or "unimpaired" flow of the basin at the site of Woodruff Dam, because it reflects the influences of reservoir evaporative losses, inter-basin water transfers, and consumptive water uses, such as municipal and industrial water supply and agricultural irrigation.

The proposed action includes five modifications to the 2008 RIOP: 1) the use of volumetric balancing is eliminated; 2) minimum flow releases will match basin inflow when basin inflow is between 5,000 and 10,000 cfs during the months of June through November (this provision is suspended during drought contingency operations); 3) drought contingency operations are not suspended and normal operations reinstituted until composite conservation storage has recovered above Zone 2 into Zone 1; 4) when releases are within powerhouse capacity (which is flows less than about 16,000 cfs) and less than 10,000 cfs, the maximum fall rate is limited to 0.25 ft/day; and 5) river stage declines of 8 feet or more will not occur in less than 14 days when river flows are less than 40,000 cfs during the spawning season (March-May) under both normal and drought operations. Pro-

visions of the proposed RIOP are described in detail below.

1.1 Action Area

Service regulations define "action area" as all areas affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR §402.02). Although the RIOP specifically addresses the releases from Woodruff Dam, the downstream-most project among the Corps' ACF reservoirs, these releases are accomplished through the collective operations of all of the Corps' ACF reservoirs. Therefore, the action area includes all aquatic habitats that are downstream of the Corps' upstream-most ACF project, Lake Lanier/Buford Dam, ending with and including Apalachicola Bay (Figure 1.A). However, the only aquatic listed species that is known to occur in this action area upstream of Woodruff Dam is a single purple bankclimber found in Goat Rock Reservoir in 2000 (Stringfellow 2011 pers. comm.). The proposed action is not anticipated to result in any physical changes to the environment of this individual animal. Therefore, while the action area includes all aquatic habitats that are downstream of the Corps' upstream-most ACF project, Lake Lanier/Buford Dam, ending with and including Apalachicola Bay, the effects of the action are limited to the aquatic habitats downstream of Woodruff Dam ending with and including Apalachicola Bay. This portion of the action area, which we address in the remainder of this BO, is shown in Figure 1.1.A. Hereafter, our use of the term "action area" refers to this limited portion of the broader action area. We refer to locations in the action area by river mile (RM), which is the distance from the mouth of the river as noted on USGS 7.5-minute topographic maps.

1.2 Minimum Discharge

Like the 2008 RIOP, the proposed action varies minimum discharges from Jim Woodruff Dam by basin inflow, composite conservation storage level and by month. The releases are measured as a daily average flow in cfs at the Chattahoochee gage. Table 1.2.A illustrates minimum releases from Jim Woodruff Dam prescribed by the proposed action and shows when and how much basin inflow is available for increasing reservoir storage. Except when basin inflow is less than 5,000 cfs and during some down-ramping periods, the minimum releases are not required to exceed basin inflow. The RIOP defines basin inflow threshold levels that vary by three seasons: spawning season (March-May); non-spawning season (June-November); and winter (December-February).

The RIOP incorporates composite conservation storage thresholds that factor into minimum release decisions. Composite conservation storage is calculated by combining the conservation storage of Lake Sidney Lanier, West Point Lake, and Walter F. George Lake. Storage in each of the individual storage reservoirs is divided into four operational Zones. The composite conservation storage utilizes the four-Zone concept as well; e.g., Zone 1 of the composite conservation storage represents the combined conservation storage available in Zone 1 for each of the three storage reservoirs (Figure 1.2.A).

During the spawning season (March-May), the RIOP defines two sets of four basin inflow thresholds and corresponding releases based on composite conservation storage. When composite conservation storage is in Zones 1 and 2, a less conservative operation is in effect. When composite conservation storage is in Zone 3, a more conservative operation allows for greater reten-

tion of basin inflow in storage, and when composite conservation storage falls below the bottom of Zone 3 into Zone 4 the most conservative drought contingency operations are "triggered." Drought contingency operations are described in section 1.4 below. During the spawning season, a daily monitoring plan that tracks composite storage will be implemented in order to determine water management operations. Recent climatic and hydrological conditions experienced and meteorological forecasts will be used in addition to the composite conservation storage values when determining the appropriate basin inflow thresholds to utilize in the upcoming days.

During the non-spawning season (June-November), the RIOP defines one set of four basin inflow thresholds and corresponding releases based on composite conservation storage in Zones 1-3. The proposed action modifies the 2008 RIOP while operating in these composite conservation zones by requiring that releases match or exceed basin inflow when basin inflow is between 5,000 and 10,000 cfs (was between 5,000 and 8,000 cfs in the 2008 RIOP). This change also requires slight adjustments to the basin inflow levels and minimum release provisions at basin inflows greater than 10,000 cfs. Table 1.2.A reflects the proposed action with the modifications to the 2008 RIOP. When composite conservation storage falls below the bottom of Zone 3 into Zone 4 the drought contingency operations are "triggered".

During the winter season (December-February), there is only one basin inflow threshold and corresponding minimum release (5,000 cfs) while in composite conservation storage Zones 1-3. There are no basin inflow storage restrictions provided this minimum flow is met. When composite conservation storage falls below the

bottom of Zone 3 into Zone 4 the drought contingency operations are "triggered".

The flow rates included in Table 1.2.A prescribe minimum, and not target, releases for Jim Woodruff Dam. During a given month and basin inflow rate, releases greater than the Table 1 minimum releases may occur consistent with the maximum fall rate schedule, described below, or as needed to achieve other project purposes, such as hydropower or flood control.

1.3 Maximum Fall Rate

The RIOP prescribes maximum fall rates for the releases from Woodruff Dam (Table 1.3.A). Fall rate, also called down-ramping rate, is the vertical drop in river stage (water surface elevation) that occurs over a given period. The fall rates are expressed in units of feet per day (ft/day), and are measured at the Chattahoochee gage as the difference between the daily average river stage of consecutive calendar days. Rise rates (i.e., today's average river stage is higher than yesterday's) are not addressed. The proposed action modifies the maximum fall rate schedule (Table 1.3.A) prescribed by the 2008 RIOP by limiting the maximum fall rate to 0.25 ft/day or less when releases are within powerhouse capacity and less than 10,000 cfs (was 8,000 cfs in the 2008 RIOP). Unless otherwise noted, fall rates under the drought contingency operation would be managed to match the fall rate of the 1-day basin inflow. The Corps proposes to adopt in this amended RIOP its response to RPM 2008-4 of the 2008 BO, which ensures that river stage declines of 8 feet or more will not occur in less than 14 days when river flows are less than 40,000 cfs (March-May). The proposed action eliminates the use of volumetric balancing, which was included in the 2008 RIOP.

1.4 Drought Contingency Operations

The RIOP incorporates a drought contingency operation (referred to as drought plan). The drought plan specifies a minimum release from Jim Woodruff Dam and temporarily suspends the other minimum release and maximum fall rate provisions until composite conservation storage within the basin is replenished to a level that can support them. The minimum discharge is determined in relation to composite conservation storage and not average basin inflow under the drought plan. The drought plan is "triggered" when composite conservation storage falls below the bottom of Zone 3 into Zone 4. At that time all the composite conservation storage Zone 1-3 provisions (seasonal storage limitations, maximum fall rate schedule, and minimum flow thresholds) are suspended and management decisions are based on the provisions of the drought plan. The drought plan includes a temporary waiver from the existing WCP to allow temporary storage above the winter pool rule curve at the Walter F. George and West Point projects if the opportunity presents itself and/or begin spring refill operations at an earlier date in order to provide additional conservation storage for future needs, including support of minimum releases from Jim Woodruff Dam.

The drought plan prescribes two minimum releases based on composite conservation storage in Zone 4 and an additional zone referred to as the Drought Zone (Figure 1.2.A). The Drought Zone delineates a volume of water roughly equivalent to the inactive storage in lakes Lanier, West Point and Walter F. George plus Zone 4 storage in Lake Lanier. However, the Drought Zone line has been adjusted to include a smaller volume of water at the beginning and end of the calendar year. When the composite conservation storage is within

Zone 4 and above the Drought Zone, the minimum release from Jim Woodruff Dam is 5,000 cfs, and the Corps may store all available basin inflow above 5,000 cfs. Once the composite conservation storage falls below the Drought Zone, the minimum release from Jim Woodruff Dam is 4,500 cfs, and the Corps may store all available basin inflow above 4,500 cfs. When transitioning from a minimum release of 5,000 cfs to 4,500 cfs, maximum fall rates are limited to a maximum 0.25 ft/day drop. The 4,500 cfs minimum release is maintained until composite conservation storage returns to a level above the top of the Drought Zone, at which time the 5,000 cfs minimum release is re-instated.

Under the 2008 RIOP, the drought plan was in effect until composite conservation storage reached a level above the top of Zone 3 (i.e., within Zone 2). At that time, the temporary drought plan provisions were suspended, and all the other provisions were re-instated. The proposed action modifies the 2008 RIOP drought plan by increasing the composite conservation storage level "trigger" for re-instating normal operations (i.e., the Corps can store more water for a longer period than in the 2008 RIOP). Under the proposed action, the drought plan provisions remain in place until composite conservation storage reaches a level above the top of Zone 2 (i.e., within Zone 1). The proposed action also requires adherence to the spawning season fall-rate provision during drought contingency operations, which ensures fall rates less than 8 feet in 14 days when river flows are less than 40,000 cfs (March-May).

During drought contingency operations, the Corps will assess the status of water management operations relative to the triggers on the first day of each month, also considering other relevant data, recent climatic and hydrological conditions experienced, and meteorological

forecasts will be used when determining the set of operations that apply to the upcoming month.

1.5 Conservation Measures

Conservation measures are actions that benefit or promote the recovery of a listed species that a Federal agency includes as an integral part of its proposed action and that are intended to minimize or compensate for potential adverse effects of the action on the listed species. The RIOP and the proposed modifications were formulated in large part to avoid and minimize impacts to listed species while achieving other authorized project purposes. Minimum flow and maximum fall rates are set based upon the current basin inflow in a way that limits most project-induced alterations of the flow regime to higher flow rates. At lower flow rates in the months of March through November and when composite storage is in Zone 3 or higher, the Corps releases a minimum of not less than basin inflow (Table 1.2.A) and limits the rate of river stage decline (Table 1.3.A). When basin inflow is less than 5,000 cfs, which did not occur in the pre-Lanier average daily flow record of the Chattahoochee gage (1929 through 1955), the Corps augments basin inflow, which offsets to some degree the impact of the evaporative losses, non-project related consumptive water uses, and drought conditions more severe than previously observed in the Basin.

* * *

1.6 Tables and Figures for Section 1

Table 1.2.A. Proposed Action RIOP Releases From Jim Woodruff Dam.

Months	Composite Storage Zone	Basin Inflow (BI) (cfs)	Releases from JWLD (cfs)	Basin Inflow Available for Storage[1]
March - May	Zones 1 and 2	>= 34,000	>= 25,000	Up to 100% BI > 25,000
		>= 16,000 and < 34,000	>= 16,000 + 50% BI > 16,000	Up to 50% BI > 16,000
		>= 5,000 and < 16,000	>= BI	
		< 5,000	>= 5,000	
	Zone 3	>= 39,000	>= 25,000	Up to 100% BI > 25,000
		>= 11,000 and < 39,000	>= 11,000 + 50% BI > 11,000	Up to 50% BI > 11,000
		>= 5,000 and < 11,000	>= BI	
		< 5,000	>= 5,000	
June - November	Zones 1,2, and 3	>= 22,000	>= 16,000	Up to 100% BI > 16,000

[1] Consistent with safety requirements, flood control purposes, and equipment capabilities.

		>= 10,000 and < 22,000	>= 10,000 + 50% BI > 10,000	Up to 50% BI > 10,000
		>= 5,000 and < 10,000	>= BI	
		< 5,000	>= 5,000	
December -February	Zones 1,2, and 3	>= 5,000	>= 5,000	Up to 100% BI > 5,000
		< 5,000	>= 5,000	
At all times	Zone 4	NA	>= 5,000	Up to 100% BI > 5,000
At all times	Drought Zone	NA	>= 4,500[2]	Up to 100% BI > 4,500

[2] Once composite storage falls below the top of the Drought Zone ramp down to 4,500 cfs will occur at a rate no greater than 0.25 ft/day drop.

* * *

4.2.2 General Effects on the Flow Regime

The Corps alters the flow regime of the Apalachicola River by storing and releasing water from its reservoirs. The ResSim model of the RIOP simulates these operations using the historically measured/estimated consumptive water uses. To the extent that these consumptive use data are accurate, differences between the historically observed flows (i.e., baseline, 1975 to 2008) and the simulated flows of the RIOP are due to differences in reservoir operations, as the model is driven by the observed hydrology. The volume of water in the Corps' three largest ACF reservoirs (composite storage of Lanier, West Point, and W.F. George) is seldom stable for extended periods, and follows a general pattern of increasing storage from January through June or July, and decreasing storage thereafter. The expected general pattern of flow alteration, therefore, is depletion during the first half of the year during periods of relatively high flow and augmentation during the second half of the year during periods of relatively low flow.

Figure 4.2.2.A shows the magnitude of this annual cycle of re-fill and draw-down by comparing the January-to-June maximum composite storage level with the July-to-December minimum composite storage level for both historical operations and the RIOP for the years 1976 to 2008 (we could not use 1975 to 2008 for this comparison because composite storage values for the complete year of 1975 were not available). The primary difference between the observed historical levels and the RIOP levels is the amplitude of the annual cycle: the RIOP generally has lower maximum storage in the first half of the year, and higher minimum storage in the

second half of the year. The annual average drawdown under the RIOP by this measure is 407,003 acre feet, compared to 653,772 acre feet historically, a 38% reduction in reservoir drawdown. Stored or released at a constant rate over a 6-month period (180 days), these volumes are equivalent to flow rates of 1,140 cfs and 1,831 cfs, respectively.

Figures 4.2.2.B and 4.2.2.C examine how the RIOP's change in the overall range of reservoir elevations would affect the seasonal timing and magnitude frequency of the flow of the Apalachicola River. These figures show the frequency (% of days) that daily average discharge (cfs) values are exceeded during the years 1975-2008 for each calendar month. To better view the differences between the exceedance frequencies of the historical flows and the RIOP flows, Figures 4.2.2.B and 4.2.2.C display the results of this analysis for flows that are exceeded more than 10% of the time because the highest flows are generally several orders of magnitude greater than all other flows and would require a much expanded scale for the vertical axis. Figures 4.2.2.B and 4.2.2.C also list the average of all the days included in the analysis for each month, including the highest flows, which is a measure of the total volume of water represented by the frequency/magnitude curves.

Despite the reduced amplitude of the annual reservoir refill/drawdown cycle noted above, the frequency and magnitude of simulated flows under the RIOP are generally comparable to historical flows in January through April and in December. Average flows under the RIOP for these months are within 3% of the historical baseline averages. The remaining months of the year, however, show greater departures from the historical flows. RIOP flows are higher more often in No-

vember, making average flow in November 10.7% greater under the RIOP. Average flow in October is 4.0% greater under the RIOP, with higher frequencies at flows greater than about 14,000 cfs and less than about 10,000 cfs. RIOP flows are generally lower more often in May through September, with the greatest departures in August and September, where average flows of the RIOP are 1,053 cfs (7.4%) and 757 cfs (6.3%) lower than historical baseline flows, respectively. Lower flows during these months negatively affect mussels because the risk of exposure is higher, habitat is constricted, and water temperatures are higher.

We used the Corps' simulated RoR operation to count the number of days that reservoir operations, both historically observed and simulated under the RIOP, were either decreasing or increasing the flow into the Apalachicola River, and to quantify the volume of that depletion and augmentation. For simplicity, we counted all deviations from RoR flow as either a depletion or an augmentation, and on no days did the simulated RoR flow exactly equal the Baseline or RIOP flow. Historical ACF reservoir operations altered the flow 56.3% of the days by flow augmentation and 43.7% of the days by flow depletion, whereas the RIOP simulation is slightly more evenly divided between augmentation days (53.7%) and depletion days (46.3%). The more striking difference between the Baseline and the RIOP is in the volume of the alterations. When Baseline flow was greater than the estimated RoR flow, the average daily augmentation was 3,287 cfs, and when Baseline flow was less than RoR, the average daily depletion was 3,936 cfs. Under the RIOP, average daily augmentation was 1,801 cfs, and average daily depletion was 2,066 cfs. Operations in support of commercial navigation throughout most of the Baseline, a practice which

is not simulated in the RIOP, may partially account for this difference in depletion/augmentation volumes. However, even in the more recent years of the Baseline (post 1999), during which the Corps has only occasionally stored water and made releases for navigation, the average daily flow alteration (both augmentation and depletion) is about 50 percent greater than under the same years of the RIOP simulation.

The RIOP model maintains a minimum release from Woodruff Dam of between 4,550 and 5,050 cfs, a flow range which occurs about 3.7% of the time (464 days) in the years 1975-2008. Flows less than or equal to 5,050 cfs occurred for 117 days in the Baseline record, or 0.9% of the time, and the lowest flow recorded was 3,900 cfs. The RIOP is intended to support the minimum flow 5,000 cfs until composite storage falls into the "drought zone" of Zone 4, which occurs for one month in the simulation (November, 2007). Only the 5,000 cfs minimum release (and 4,500 cfs while in the drought zone) and downramping according to the fall rate schedule are supported with releases from storage: all other minimum release provisions of the RIOP do not require flows that are greater than current levels of basin inflow. If we discount the storage required to meet the fall rate schedule, we may estimate the amount of storage required each year solely to sustain the minimum release schedule of the RIOP as the sum of daily deficits in basin inflow relative to 5,050 cfs (5,050 minus basin inflow), and relative to 4,550 cfs during drought operations (4,550 minus basin inflow in November, 2007). Figure 4.2.2.D shows the total deficits for the years 1975 to 2008 using the RoR simulation as the measure of basin inflow (actual operations use 7-day average basin inflow computed from daily local inflow for each reservoir). Most years (19 years of the 34 years, or

55.9%) have no deficit, and the non-zero deficit years vary from almost none to 702,411 ac-ft in 2007. Total storage capacity of lakes Lanier, West Point, and George is about 3.5 million ac-ft, of which 1.6 million ac-ft is considered "conservation" or "active" storage.

We examine the possible effects of these various changes to the flow regime to the listed species and their habitats in the remaining sections of this chapter.

* * *

6 CONCLUSION

The proposed action provides both beneficial and adverse effects to the species and designated critical habitats we have assessed. To the extent that the consumptive use assumptions are accurate, differences between the Baseline and the simulated flows of the RIOP are due to differences in reservoir operations, as the model is driven by the observed hydrology. Therefore, we attribute all differences between the Baseline and RIOP simulated flow regime to the Corps' discretionary operations. Differences between the Baseline and RIOP are summarized in general form below (for more details, see sections 4 and 5):

Beneficial Effects

- Basin inflow is augmented when it is less than 5,000 cfs; no daily flows would be less than 5,000 cfs at the Chattahoochee gage. However, if exceptional drought provisions are triggered, this would become no days less than 4,500 cfs (Figure 4.2.3.A).
- The frequency (percent of years) of growing-season (April-October) floodplain connectivity to the main channel is increased (Figure 4.2.4.B).

- A reduction in the inter-annual frequency of flows less than 7,500 cfs (Figure 4.2.3.A).
- A decrease in the maximum number of days/year of flows at all levels except less than 6,000 cfs (Figure 4.2.3.B).
- A decrease in the maximum number of consecutive days/year of flows between 7,000-10,000 cfs (Figure 4.2.3.C).
- A decrease in the median number of days/year of flows less than 9,000 cfs (Figure 4.2.3.D).
- A decrease in the median consecutive number of days/year of flows less than 8,000 cfs (Figure 4.2.3.E).
- Lower fall rates in the most extreme categories (>1 ft/day) (Figures 4.2.3.F-H).

Adverse Effects

- RIOP flows are lower than the baseline more often in May through September, with the greatest departures in August and September (Figures 4.2.2.B-C).
- Lower minimum flows in about half the years from 1975-2008 (Table 4.2.3.A)
- An increase in inter-annual frequency of flows from about 7,500 to 10,000 cfs (Figure 4.2.3.A).
- An increase in maximum number of days per year of flows less than 6,000 cfs (Figure 4.2.3.B).
- An increase in maximum number of consecutive days per year of flows less than 6,000 cfs (Figure 4.2.3.C).

- An increase in median number of days per year of flows between 7,000 and 9,500 cfs (Figure 4.2.3.D).
- An increase in the median consecutive number of days/year of flows less than 9,000-10,000 cfs (Figure 4.2.3.E).
- An increase in percent of days with fall rates from 0.25 to 1.0 ft/day (Figure 4.2.3.F).
- An increase in the median fall rates over the Baseline rate in the range of flows where mussels occur (Table 4.2.3.B).
- Fall rates less than about 0.20 ft/day occur with greater frequency than the Baseline period (when flows are less than 8,000 cfs) since the implementation of the maximum fall rate schedule in 2006 (Figure 4.2.3.H).

Most of these effects, both the beneficial and the adverse, derive from relatively minor differences between the RIOP and Baseline. Generally, it appears that the Corps would store water more often and augment flows less often under the RIOP than has occurred historically. The RIOP uses some of this stored water to maintain a minimum flow of 5,000 cfs, but the frequency of flows less than 10,000 cfs is increased.

The remainder of this section summarizes and consolidates our findings in the previous sections for each listed species and critical habitat in the action area.

6.1 Fat threeridge

Fat threeridge located in moderately depositional habitat are likely moving in response to changing water levels to maintain an optimal depth or associated habitat parameter. Sediment deposition also likely plays a role. At the time of the 2008 BO there were no listed mussels

at river stages greater than 5,000 cfs due to the drought of 2006-2008. Although we noted that take may occur when individuals occupy stages greater than 5,000 cfs, we did not anticipate take under this scenario because it was considered an anomaly related to very high flows in 2005. However, based on recent data, it appears that fat threeridge readily recolonize higher bank elevations at flows greater than 5,000 cfs, where they could be at risk of stranding and mortality when flows decline.

Mortality during these events was highest in the Wewa reach of the Apalachicola River where the main channel populations are the most abundant and slopes are shallow. Some mortality occurred in the Chipola River, but it appears to be limited. Mortality estimates from these all of these events range from <1% to 2% depending on preceding hydrologic conditions, fall rates, habitat condition, and the size of the population in Swift Slough. Since the first event was recognized in 2006, 3-4% of the total estimated population of fat threeridge may have died during these various low flow events. We may be over-estimating the relative amount of mortality because we are likely underestimating the total population of fat threeridge in the action area.

Channel morphology changes have likely contributed to a substantial decline of the species distribution in the upstream-most 30 miles of the river. It is abundant in moderately depositional habitat in the Wewa reach and the Chipola River and the population is relatively large. There is evidence of good recruitment in the Wewa and Lower reaches, but more information is needed to determine the status of recruitment in the Chipola River.

Based on best available information, we believe the population of fat threeridge in the action area is stable and possibly increasing. The population appears to be

doing well despite the principal effects to the fat threeridge in the action area that we described in section 3, Environmental Baseline. The inter-annual frequency and the intra-annual duration of low flows in the pre-Lanier period substantially increased in the post-West Point period. Flows under the RIOP will further increase the frequency and duration of low flows. Flows less than 5,000 cfs were not recorded in the pre-Lanier period. The RIOP supports a minimum flow of 5,000 cfs, which benefits the fat threeridge, except when exceptional drought operations are triggered and minimum-flow support is reduced to 4,500 cfs. Supporting a minimum flow of 5,000 cfs in the future with less basin inflow as demands increase would require greater storage releases from the reservoirs, which could trigger the 4,500 cfs minimum flow provision of the RIOP more frequently. The results of the PVA indicate that the population can sustain reductions of 1-2% that we estimate occurred in the population recently if such reductions occur with a probability of once every 6 years, and if similar reductions occur when flows are reduced to 4,500 cfs, with a probability of once every 69 years. However, the PVA also indicates that increasing the frequency of such events results in a greater impact to long-term population viability. As such, we need to continue to monitor the frequency and severity of these events. If the events occur with greater frequency, it may be necessary to reinitiate consultation.

Therefore, our analysis indicates that the RIOP would have a negative, but not appreciable, impact on the survival and recovery of the fat threeridge due to mortality and other adverse effects if flows are reduced to 4,500 cfs or if additional recolonization and subsequent mortality occurs at flows above 5,000 cfs.

6.2 Purple bankclimber

Although the population of purple bankclimbers at the Race Shoals (the limestone shoal at RM 105) is relatively large (about 30,000 individuals), the species is apparently rare in the rest of the river and may be experiencing poor recruitment. A whole river population estimate is not available, but the species is much more detectable and probably much more abundant in other parts of its range, such as the Flint River and the Ochlockonee River. The principal effects to the purple bankclimber in the action area are those we described in section 3, Environmental Baseline. Channel morphology changes may have contributed to a decline of the species in the upstream-most 30 miles of the river, although the species is still found in this reach in relatively high numbers at Race Shoals. Flow regime alterations discussed above (section 6.1) for the fat threeridge apply also to the bankclimber, but probably to a lesser extent, because this species appears to occur more often in deeper portions of the stream channel than the threeridge. As such, we have observed limited mortality of the population during low flows since 2008.

Therefore, our analysis indicates that the RIOP would have a negative, but not appreciable, impact on the survival and recovery of the purple bankclimber due to mortality and other adverse effects if flows are reduced to 4,500 cfs or if additional recolonization and subsequent mortality occurs at flows above 5,000 cfs. Bankclimbers are rarely found at stages greater than 4,500 cfs in the Apalachicola River.

6.3 Chipola slabshell

Recent surveys (1990 to present) have documented many new subpopulations but found the species gener-

ally occurs in relatively low abundance. We have no evidence that these populations are currently declining and we consider the Chipola slabshell status to be stable. Many of the effects we described in section 3, Environmental Baseline, do not apply to the Chipola slabshell, as its known range within the action area is limited to the Chipola River downstream of the Chipola Cutoff. Most of the species range is in the Chipola River upstream of the action area. Channel morphology appears less altered in the Chipola River than the Apalachicola River. Flow regime alterations discussed above (section 6.1) for the fat threeridge apply also to the slabshell, but probably to a lesser extent in the narrower channel and higher bank slopes of the Chipola. No slabshell mortality has been documented during the low flows of 2006-2008 and 2010-2011. We also expect the mortality of the Chipola slabshell to be less than the expected for the fat threeridge or purple bankclimber because of its expected higher mobility.

Therefore, our analysis indicates that the RIOP would have a negative, but not appreciable, impact on the survival and recovery of the Chipola slabshell due mortality and other adverse effects if flows are reduced to 4,500 cfs or if additional recolonization and subsequent mortality occurs at flows above 5,000 cfs.

6.4 Critical Habitat

Designated critical habitat for the fat threeridge and purple bankclimber in the action area includes most of the Apalachicola River unit, and the downstream-most part of the Chipola River Unit. Designated habitat for the Chipola slabshell only occurs within the downstream-most part of the Chipola River Unit. In the effects analysis, we discussed how the RIOP may affect the three of the five PCEs of the mussel critical habitat:

1) permanently flowing water; 2) water quality; and 3) fish hosts. The RIOP does not appear to reduce the amount of floodplain habitat available to fish hosts, some of which likely rely upon floodplain habitats for spawning and rearing habitat. Droughts substantially change the nature of all of these PCEs compared to normal flows, but our analysis does not show that the RIOP would appreciably change the quantity or quality of the PCEs relative to the Baseline under the drought conditions represented in the 1975-2008 record.

While the RIOP may also negatively affect mussel habitat primary constituent elements by reducing minimum releases to 4,500 cfs, the circumstances triggering this action would occur infrequently (probability of 1 in 69 years). We do not anticipate that increasing the frequency and duration of low flows or reducing minimum releases to 4,500 cfs at this frequency would alter or affect the critical habitat in the action area to the extent that it would appreciably diminish the habitat's capability to provide the intended conservation role for the three mussel species. In addition, the nature of these effects is dynamic and would not produce permanent or static alterations to any PCE.

6.5 Determinations

After reviewing the current status of the listed species and designated critical habitat, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the proposed action: 1) will not jeopardize the continued existence of the fat threeridge, purple bankclimber, and Chipola slabshell; and 2) will not destroy or adversely modify designated critical habitat for the fat threeridge, purple bankclimber, and Chipola slabshell.

The RIOP is intended to apply until a new WCP is adopted. Given the Corps' current timeline, the findings of this BO shall apply for 5 years until May 22, 2017, or until amended through a reinitiation of consultation or superseded with a new opinion for a new proposed action.

* * *

APPENDICES AND EXHIBIT A TO THE AFFIDAVIT OF JUDSON H. TURNER, DIRECTOR OF THE GEORGIA ENVIRONMENTAL PROTECTION DIVISION (January 10, 2013)

APPENDIX 1

Historical and Forecasted Population of Counties Using Lake Lanier System for Water Supply

County	1990[1]	2000[1]	2010[1]	2020[2]	2030[2]	2040[3]
Cobb	447,745	607,751	688,078	800,469	909,747	1,033,943
Dawson[4]	9,429	15,999	22,330	27,029	32,022	37,937
DeKalb	545,837	665,865	691,893	761,537	817,276	877,096
Forsyth	44,083	98,407	175,511	256,307	383,258	573,089
Fulton	648,951	816,006	920,581	1,095,897	1,284,954	1,506,626
Gwinnett	352,910	588,448	805,321	1,019,098	1,270,020	1,582,724

Habersham[4]	27,621	35,902	44,553	48,705	54,623	61,260
Hall	95,428	139,277	179,684	226,172	282,164	352,018
Lumpkin[4]	14,573	21,016	29,966	38,075	47,960	60,411
White[4]	13,006	19,944	26,704	31,057	34,841	39,086
Totals[5]	2,199,583	3,008,615	3,584,621	4,273,267	5,116,865	6,127,000

[1] From US Census Bureau

[2] Georgia Office of Planning and Budget 2012 Projections

[3] Projection based upon assumption that 2030–2040 growth rate (in per cent) will be same as 2020–2030.

[4] Watershed counties not currently withdrawing from Lanier, but may withdraw in future.

[5] This total does not include the additional counties that purchase water from the water systems that withdraw water from Lake Lanier and the Chattahoochee River, such as Paulding County.

APPENDIX 2

Water Systems That Withdraw Directly from Lake Lanier

County	System Name	2011 Withdrawals (MGD)		
		Max. Month	Max. Day	Annual Average
Forsyth	City of Cumming	17.5	18.8	11.6
Forsyth	Forsyth County	11.8	12.8	8.6
Gwinnett	City of Buford	1.5	1.7	1.3
Gwinnett	Gwinnett County Water & Sewerage Authority	90.9	118.8	76.1
Hall	City of Gainesville	20.7	28.5	17.6
Total				115.2

APPENDIX 3

Water Systems That Rely on Water Supply Releases from Lake Lanier to the Chattahoochee River

County	System Name	2011 Withdrawals (MGD)		
		Max. Month	Max. Day	Annual Average
Cobb	Cobb County Marietta Water Authority	51.9	64.8	45.1
DeKalb	DeKalb County Public Works (Water and Sewer)	84.7	114.8	72.7
Fulton	Atlanta-Fulton Water Resources Commission	54.3	69.9	38.7
Fulton	City of Atlanta	101.8	123.4	89.2
Total				245.7

APPENDIX 4

Projected 2040 Water Withdrawals and Returns

(Annual Average)

Table 1 Current and Projected 2040 Water Withdrawals and Returns Above Buford Dam

Time Horizon	Withdrawal (mgd)	Return (mgd)	Net Consumptive Loss (mgd)
2011	120.6[1]	38.1	82.4
2040	297	165	132

Table 2 Current and Projected 2040 Chattahoochee River Water Withdrawals and Returns

Time Horizon	Withdrawal (mgd) (Buford Dam to Peachtree Creek)	Return (mgd)			Net Consumptive Loss (mgd)
		Atlanta Reach (Buford Dam to Peachtree Creek)	Whitesburg Reach (Peachtree Creek to Whitesburg gage)	Total	
2011	247.5[2]	34.5	185.3	219.8	27.7
2040	408	94	291	385	23

Notes:

[1] Including facilities upstream of Lake Lanier. These additional withdrawals are included to provide the sum of all consumptive loss above Buford Dam.

[2] Including facilities that withdraw from tributaries of the Chattahoochee River. These additional withdrawals are included to provide the sum of all consumptive loss below Buford Dam and above the Whitesburg gage.

APPENDIX 5

HTIME REQUIRED TO PLAN, PERMIT, FINANCE, AND CONSTRUCT WATER SUPPLY RESERVOIRS IN GEORGIA

Project / Activity	Bear Creek Reservoir, Jackson Co.	Cedar Creek Reservoir, Hall Co.	Tussahaw Creek Reservoir, Butts Co.	Big Haynes Creek Reservoir, Rockdale Co.	Line Creek Reservoir (Lake McIntosh), Fayette Co.	Hickory Log Creek Reservoir, Cherokee Co.
Applicant's initial contact with EPD regarding a new reservoir.	2/2/1994	7/17/1996	9/22/2000	11/5/1987	10/27/1987	3/22/2000

Applicant initial contact with the Corps regarding 404 permit for reservoir	2/2/1994	7/17/1996	9/22/2000	4/29/1991	1/6/1989	3/22/2000
Applicant submits water withdrawal permit application	3/3/1997	4/2/2002	3/13/2001	6/21/1999	3/21/2001	10/4/2005
EPD comments on withdrawal application	5/28/1997	4/22/2002	5/22/2001	12/7/1999	4/16/2001	11/22/2005
EPD provides confirmation of need (to the Corps).	4/20/1995	Information unavailable	11/3/2000	5/6/1991	11/20/2000	11/20/2000
Applicant submits 404 application to the Corps.	2/22/1995	8/26/1997	11/15/2000	5/28/1991	5/1/2002	4/27/2000

The Corps notifies public of the 404 application and requests comments	5/26/1995	10/8/1997	12/27/2000	11/22/1991	10/3/2002	12/27/2000
The Corps responds to applicant's 404 application	7/1/1995	11/13/1997	2/1/2001	12/28/1991	11/8/2002	2/28/2001
EPD issues 401 Water Quality Cert.	5/17/1996	8/21/1998	5/22/2001	8/31/1992	9/6/2006	8/2/2002
EPD issues with-drawal permit	4/1/2002	8/1/2002	2/14/2003	3/22/2002	9/6/2006	9/12/2008
The Corps issues final 404 permit to applicant	7/20/1996	11/16/1998	10/23/2002	10/2/1992	6/27/2007	5/24/2004
EPD issues Safe Dams permit	10/1999	10/2001	8/25/2003	5/31/1994	12/9/2009	4/29/2008

Jurisdiction constructs dam.	04/2011	9/11/2003	June 2005	1/27/1997	April 2010	8/5/2005
Jurisdiction fills reservoir.	Spring 2002	8/11/2005	Sept. 2005	June 1998	Started November 1, 2012	6/30/2011

EXHIBIT A

Memorandum of Dr. Wei Zeng
Manager, Hydrologic Analysis Unit

[Georgia Department of Natural Resources letterhead]

Memorandum

To: Judson Turner, Director, Georgia EPD
From: Wei Zeng, Hydrology Unit, Georgia EPD
Date: January 10,2013
Subject: Technical Analysis of Georgia's 2000 Water Supply Request

Introduction

You asked me to analyze the impact to the federal reservoirs in the Apalachicola-ChattahoocheeFlint (ACF) River Basin, to hydropower production and recreation at those reservoirs, and to river flows at the state line with Florida, of Georgia's 2000 Water Supply Request. Georgia submitted the water supply request to the U.S. Army Corps of Engineers in May 2000, asking for the Corps to operate Lake Lanier to accommodate future municipal and industrial direct withdrawals from Lake Lanier and river withdrawals downstream totaling 705 million gallons per day (mgd). As more than twelve years have passed since Georgia submitted its water supply request to the Corps, Georgia is providing the Corps updated demographic and water demand information in support of its request. Georgia forecasts that its municipal and industrial water supply demands from

Lake Lanier will reach or exceed 705 mgd by approximately 2040.

The Hydrology Unit of EPD set up a mathematical model of the ACF Basin to analyze the potential impacts of Georgia's request. This memorandum documents the model settings and results.

Platform Model- HEC-ResSim

The mathematical model that we used for this analysis was developed by the U.S. Army Corps of Engineers Hydrologic Engineering Center (HEC) for analyzing reservoir operations and basin-wide water resource management. The Corps calls this platform model "HEC-ResSim." The Corps periodically upgrades HEC-ResSim's capability. The Corps released its current version of the model to the public in May 2011. This version of the model reflected the Corps' then-current ACF Basin reservoir operating plan, known as the Revised Interim Operation Plan (RIOP), as it existed as of May 2011.

Since May 2011, the Corps has made minor changes to the RIOP. The Hydrology Unit of EPD has added these changes to the Corps' May 2011 platform model. Thus, EPD's version of the HEC-ResSim model reflects operations under the current RIOP.

We modeled a 34-year period, assuming rainfall and inflow conditions that occurred from January 1, 1975 to December 31, 2008, and applied to each of these years the Corps' RIOP and, as discussed below, varying levels of water supply use. We chose the 1975-2008 period for several reasons. First, the Unimpaired Flow (UIF) data developed by the Corps only covers hydrologic conditions through December 31, 2008. In addition, this period excludes the period before all ACF federal res-

ervoirs have been in operation. Finally, the U.S. Fish and Wildlife Service has used the same simulation period for its analyses of various ACF operations. It should be noted that the droughts that most affected the federal reservoirs in the ACF Basin occurred within in this period, with the possible exception of the current drought, the duration and severity of which cannot yet be determined.

Model Setting on Water Demand

To understand the impacts of Georgia's water supply request, we compiled current and proposed future water use conditions and ran three different scenarios: what we call Baseline Condition, Scenario A, and Scenario B. The Baseline Condition assumes current water use, as further defined below. Scenario A isolates the effect of the withdrawals associated with Georgia's water supply request by applying to the model annual average gross withdrawals of 705 mgd from Lake Lanier and the Chattahoochee River through Atlanta but keeps current demands throughout the remainder of the ACF Basin. Scenario B evaluates the effects of the water use contemplated in Georgia's water supply request in combination with forecasted demands throughout the basin by assuming annual average gross withdrawals of 705 mgd from Lake Lanier and the Chattahoochee River through Atlanta and year 2040 water use throughout the remainder of the ACF Basin in Georgia, plus increasing water use in ACF Basin in Alabama, as discussed further below.

Baseline Condition

To capture the effect of current water use within the ACF Basin, we included in the model the most recent available annual (2011) withdrawal and discharge data of all permitted municipal and industrial facilities in the

Georgia portion of the ACF Basin. These include thermal electric power generating facilities that use water for cooling purposes and that incur consumptive water losses as a result of their cooling operations. We included the estimate of 2007 total ACF Basin agricultural water use that Georgia developed as part of its statewide water planning, which is the best information that we have on Georgia's current agricultural use.

We included Alabama's 2007 water consumption from the ACF Basin as estimated by the Alabama Office of Water Resources (OWR) in 2009. For water consumption in Florida, we used the numbers contained in the Corps' platform model.

In the Baseline Condition, and in Scenarios A and B, we assumed the current RIOP would remain in effect.

Scenario A – Impact of Water Supply Request

As Georgia's water supply request remains 297 mgd annual average gross lake withdrawal and 408 mgd annual average gross river withdrawal, for a total of 705 mgd, those are the amounts of withdrawal that we used in the impact analysis. We added back projected returns of treated wastewater to Lake Lanier and the Chattahoochee River. Using EPD projections, we assumed that 78% of the 705 mgd that is withdrawn will be discharged back to surface waters within the basin in the form of highly treated wastewater. This includes 165 mgd returned to Lanier and its upstream tributaries, 94 mgd returned to the Chattahoochee River between Buford Dam and Peachtree Creek, and 291 mgd returned to the Chattahoochee River downstream of Peachtree Creek. As Scenario A is intended to isolate the impact of meeting the forecasted water supply needs that would be dependent on withdrawals and water supply releases from Lake Lanier, we held water

use elsewhere in the basin at current levels (that is, levels according to most recent data available).

Scenario B – Impact of Water Supply Request in Combination with Other 2040 Georgia Demands in ACF Basin

In Scenario B, we added to the water supply uses contemplated by Georgia's water supply request the other projected 2040 water demands within the ACF Basin in Georgia. These include projected municipal, industrial, and agricultural water needs. EPD developed the forecasts for those demands as part ofthe planning associated with the State Water Plan and Regional Water Development Plans. We do not have projected water demands for portions of the basin that are in Alabama. To estimate the cumulative impact resulting from future Alabama demand, we assumed an increase of 15% to the current Alabama figure used in the baseline condition alternative. We held the level of water use in the Apalachicola River reach the same as in the Baseline Condition because we have no information upon which to base an estimate of future water use in the State of Florida. I have enclosed a DVD containing these models.

Results and Analysis

In my discussion of the modeling results, Scenarios A and B are compared to the Baseline Condition. The potential impact of Georgia's Request is described with regard to:

(1) Average elevations in the federal reservoirs of Lanier, West Point, and Walter F. George;

(2) Minimum elevations in these reservoirs;

(3) Elevation duration curves in these reservoirs;

(4) Daily average power generation in the federal reservoirs;

(5) Percentage of time when there is some level of recreational impact; and

(6) State line flow duration curve.

Reservoir Elevations

Using the Res-Sim Model, we determined the average and minimum daily elevations, and the elevation duration curves, of the federal reservoirs in the ACF Basin under the Baseline Condition and Scenarios A and B. The average and minimum daily elevations of a reservoir are obtained by looking at the daily elevation of the period of simulation, from January 1, 1975 to December 31, 2008, and calculating the average and minimum daily value for each of the 365 days in a year. The elevation duration curve shows the percentages of time over the entire 34-year period that the reservoirs will exceed certain elevations.

As shown in Slides 9 and 25 of the attached Exhibit 1, the average daily elevation of Lake Lanier under both Scenarios A and B will be no more than 0.7 feet lower around May 1 as compared with the Baseline Condition. May 1 is the date on which the top of conservation pool guide curve for Lake Lanier rises to 1071 feet for the first time in the year and is the beginning of the primary recreational season. Similarly, the average daily elevation of Lake Lanier around December 1 under Scenarios A and B is no more than 1.5 feet lower than under the Baseline Condition.

The difference between the Baseline Condition and Scenarios A and B is more pronounced in terms of the daily minimum elevation in Lake Lanier. (See Slides 10 and 26.) At the lowest point on the minimum daily ele-

vation curve, which usually takes place in the month of December, the elevation under Scenarios A and B is approximately 6 feet lower than in the Baseline Condition.

The elevation duration curves for Lake Lanier are shown on Slides 11 and 27. For the upper 30% of the duration curve (representing the times of higher reservoir elevation), the elevation of Lake Lanier is essentially the same in the Baseline Condition and Scenarios A and B. Moreover, for approximately 70% of the duration curve, the elevation under Scenarios A and B is only approximately one foot or less lower than in the Baseline Condition. The difference is greater, up to 6 feet, at the lowest point in the lower 30% of the duration curve.

The impact on Lakes West Point and Walter F. George is minor. (See Slides 12 through 17 and Slides 28 through 33.) There is very little, only inches, difference in average daily elevation at both West Point and Walter F. George between the Baseline Condition and Scenarios A and B. In terms of minimum daily elevation, the greatest difference between the Baseline Condition and Scenarios A and B is only 1.5 feet in West Point (in the months of September and October), and up to 1.2 feet at Walter F. George (in September and October). At the point in the year when West Point and Walter F. George typically reach their lowest elevation for the year (usually in November or December), there is little difference between the Baseline Condition and Scenarios A and B. Even less of a change is evident in the elevation duration curves for Lakes West Point and Walter F. George. (See Slides 14, 17, 30, and 33).

Power Generation

The projected water withdrawals and Corps operations necessary to support them will not have a material impact on the production of hydropower at Buford Dam. Under Scenario A, with water supply needs of 705 mgd for the Metro Atlanta Area and current demands elsewhere, the daily average energy generated at Lake Lanier is modeled to be 319 MWh, and the annual average energy generated at Lake Lanier is modeled to be 116,435 MWh. In comparison, the daily average energy generated under the Baseline Condition is modeled to be 339 MWh and the annual average is 123,735 MWh. When Georgia has reached demands of 705 mgd from Lake Lanier and the Chattahoochee River above the Peachtree Creek confluence, combined with 2040 water supply demands throughout the remainder of the basin, the annual average energy generated at Lake Lanier is modeled to be 116,435 MWh, in comparison to 123,735 MWh under the Baseline Condition. Thus, assuming 2040 water supply demands throughout the ACF Basin, there would be less than a 6% reduction in power produced at Lanier. The impact will be even less in the years before Georgia's water demand has reached 705 mgd.

As shown by Slides 18 and 34, Georgia's future water supply demands will have very little impact on the total amount of energy produced by all of the federal reservoirs in the ACF Basin. Under Scenario A, when Georgia has reached demands of 705 mgd, the daily average energy output from all ACF federal reservoirs is modeled to be 2,671 MWh (annual average 974,915 MWh). The daily average energy output under the Baseline Condition is 2,707 MWh, and the annual average is 988,055 MWh. Thus, there will be only a reduction in daily average generation of 36 MWh (annual av-

erage reduction of 13,140 MWh) for all reservoirs combined. Under Scenario B, the daily average energy output from all ACF federal reservoirs is modeled to be 2,660 MWh (annual average 970,900 MWh). The reduction in daily average generation will be only 47 MWh (annual average reduction of 17,155 MWh). For the combined generation of all of the federal reservoirs in the ACF Basin, there is only a 1.3% reduction under Scenario A and a 1.7% reduction under Scenario B. Georgia's conclusions are consistent with those reached by the Corps in its assessment of the impact to hydropower from granting Georgia's water supply request as compared with a baseline that assumed virtually no water supply operations at all. Using that baseline of comparison, the Corps concluded that the water supply operations and lake withdrawals under Georgia's water supply request each would result in less than a 1% reduction to ACF Basin dependable hydropower capacity; that the lake withdrawals contemplated by the request would result in a reduction in basin-wide hydropower value of 4.4%; and, that the water supply releases contemplated by the request would result in a reduction in basin-wide hydropower value of less than 1%.

Recreational Impact

We evaluated the recreational impact by looking at the primary recreational season, defined by the Corps as May 1st through September 8th, and tallying the percentage of days when elevation of a reservoir is lower than the three levels of recreational impact, which are, in increasing degree of impact, the Initial Impact Line (IIL), Recreational Impact Line (RIL), and Water Access Limitation (WAL). According to the Corps, the IIL at Lake Lanier is 1066 feet above mean sea level (msl), the RIL is 1063 feet above msl, and the WAL is 1060 feet above msl. For West Point Lake, the ILL is

632 feet above msl, RAL is 628 feet above msl, and WAL is 627 feet above msl. For Lake Walter F. George, the ILL is 187 feet above msl, the RAL is 185 feet above msl, and the WAL is 184 feet above msl.

The impact to recreation is shown on Slides 19 through 21 and 35 through 37. In Scenarios A and B as compared with the Baseline Condition, the increase in percentage of days of IIL, RIL, and WAL at Lake Lanier will be 5%, 8%, and 8% respectively. Under hydrologic conditions of Year 2007, a drought year of exceptional dry conditions, the total number of days when the elevation of Lanier falls below the RIL under Scenario A is 47 days, under Scenario B is 48 days, and under the Baseline Condition is 27 days.

The recreational impact on West Point and Walter F. George is virtually non-existent. The only impact on West Point under Scenario A and Scenario B is a 1% increase in the frequency of WAL, while the recreational impact of IIL and RIL actually are lessened. At Walter F. George, there is a 1% and 2% increase in IIL in Scenario A and Scenario B, respectively. The elevation of Walter F. George does not fall to the RIL or WAL in any of the three scenarios.

State Line Flow

There is no noticeable difference between Scenario A and the Baseline Condition alternative in terms of state line flow duration curve, which suggests that the isolated increase in water supply in the metro Atlanta area itself will not result in any significant change in state line flow. (See Slides 22 and 23.) When we look at the portion of the graph between the 80 and 95 percentiles exceedence, the curve resulting from Scenario B is only around 200 cfs below the curve resulting from the Baseline Condition. (See Slides 38 and 39.) This 200 cfs is

only 4% of the minimum flow requirement of 5,000 cfs, and less than 1% of the long term average simulated flow. At the very bottom of the duration curve, note that the RIOP's Drought Zone Operation will be triggered roughly 0.2% of the time under Scenario A and only 0.2% more often under Scenario B. Overall, the change in state line flow is minor in comparison to the magnitude of state line flow assuming the RIOP remains in place, and will likely remain so in any new operation plan that replaces the RIOP.

Enclosure

* * *

Rick Scott
Governor

September 6, 2012

Ms. Rebecca Blank
Acting Secretary
U.S. Department of Commerce
1401 Constitution Avenue, NW
Washington, D.C. 20230

Dear Secretary Blank:

On behalf of Florida's oyster industry, I respectfully request that you declare a commercial fishery failure due to a fishery resource disaster for Florida's oyster harvesting areas in the Gulf of Mexico, particularly those in Apalachicola Bay, pursuant to Section 312(a) of the Magnuson-Stevens Fishery Management and Conservation Act.

The State of Florida has experienced an unprecedented decline in the abundance of oysters within our coastal estuaries, a direct consequence of which has been a significant loss of income to commercial oyster fishermen, oyster processors and rural coastal communities. Recent oyster resource assessments indicate that the outlook for the 2012/2013 harvesting season is "poor" and unlikely to sustain commercial harvesting levels. I enclose a letter and report from Florida's Department of Agriculture and Consumer Services (FDACS) assessing the current impacts. The FDACS report estimates the dockside value of oyster landed in Franklin County at $6.64 million in 2011, which translates to a larger and significant overall economic impact to the affected communities. After conferring with county leadership, Franklin County estimates the em-

ployment impact to affect 2,500 jobs, including commercial oyster fishermen, processors and related coastal economies.

According to the report, observations and sampling of oyster populations on the primary oyster producing reefs in Apalachicola Bay during July 2012 indicated that oyster populations were in poor condition. It is believed that a combination of factors has led to the recent decline in oyster populations.

The Florida Panhandle and Apalachicola Bay, as the drainage basin of the Apalachicola, Flint, and Chattahoochee Rivers, have experienced drought conditions for several years resulting in reduced freshwater input into Apalachicola Bay. This absence of freshwater contributes to higher salinity levels adversely affecting oyster populations and contributing to mass natural mortality events and a dramatic increase in oyster predation.

Harvesting pressures and practices were altered to increase fishing effort, as measured in reported trips, due to the closure of oyster harvesting in contiguous states during 2010. This led to overharvesting of illegal and sub-legal oysters further damaging an already stressed population. Other undetermined causes may also have been involved.

Disaster relief funds authorized by the Magnuson-Stevens Act are needed to: 1) further assess the primary and secondary causes of the oyster decline; 2) determine the feasibility of actions to remediate or restore the affected resources; 3) begin actions to prevent and restore affected resources; and 4) provide economic assistance to fishing communities and small businesses, including oyster fishermen affected by the disaster.

The State of Florida is prepared to provide the information necessary for you to properly assess this situation. On behalf of Florida's oyster community, I thank you for your prompt consideration of this urgent request.

Sincerely,

/s/ Rick Scott
Rick Scott
Governor

Florida Department of Agriculture and Consumer Services
Commissioner Adam H. Putnam
The Capitol

September 5, 2012

The Honorable Rick Scott
Governor
State of Florida
The Capitol, Plaza Level 05
Tallahassee, Florida 32399

Dear Governor Scott:

I am writing today to advise you of a situation that is quickly becoming a crisis for Florida's coastal communities who rely on a vibrant and healthy oyster population for economic viability. The oyster resources in the state, particularly those in Apalachicola Bay, have been significantly impacted by the prolonged drought that many areas of the state are facing. The drought conditions in the Bay have caused the oyster resources to decrease to a level that will no longer sustain Florida's commercial oyster industry. This situation has been exacerbated by the low level of fresh water coming down the Apalachicola River into the Bay.

As you know, oysters require a delicate balance of both fresh and salt water. If salinity levels in and around oyster reefs get too high, the water is hospitable to marine organisms that prey on oysters such as oyster drills, stone crabs and conchs. In addition, high salinity creates unfavorable conditions for juvenile oyster growth. First with Tropical Storm Debby and followed shortly thereafter by Tropical Storm Isaac, the already scarce resource was further impacted. A recent assessment of the oyster resources in the Bay conducted by the Florida Department of Agriculture and Consumer Service (FDACS) concluded that current

oyster resource levels have not been this low since immediately after Hurricane Elena in 1985.

In addition to Apalachicola, we have already begun to hear from oyster harvesters in Wakulla, Dixie and Levy counties that they are also seeing high oyster mortality rates due to the drought. These areas have been closed seasonally to oyster harvesting through the summer and only opened on September 1, 2012. FDACS will conduct assessments on those areas over the next two weeks, however given the situation in Apalachicola Bay, it is likely these areas will also not support a sustained commercial harvest.

On behalf of Florida's oyster harvesters and processors, I respectfully request that you ask United States Department of Commerce Acting Secretary Rebecca Blank to declare a federal fishery disaster for Florida's oyster harvesting areas in the Gulf. I believe the current conditions meet the requirements established in Section 312(a) of the Magnuson-Stevens Fishery Conservation and Management Act and Section 308(b) of the Interjurisdictional Fisheries Act and therefore warrant this request.

To assist in your consideration of this request, I am enclosing the Apalachicola Bay Oyster Resource Assessment Report. Thank you in advance for your support of Florida's commercial oyster industry. Should you need additional information on this situation, please do not hesitate to contact me.

Sincerely,

/s/ Adam H. Putnam
Adam H. Putnam
Commissioner of Agriculture

Enclosure

OYSTER RESOURCE ASSESSMENT REPORT
APALACHICOLA BAY
AUGUST 2012
DEPARTMENT OF AGRICULTURE
AND CONSUMER SERVICES
DIVISION OF AQUACULTURE

Executive Summary

Observations and sampling of oyster populations on the primary oyster producing reefs in Apalachicola Bay during July 2012 indicated that oyster populations were depleted over most of the reef areas sampled and that surviving oyster populations are severely stressed. Staff of the Department of Agriculture and Consumer Services' Division of Aquaculture conducted assessments of oyster populations after preliminary reconnaissance following the passage of Tropical Storm Debby indicated that oyster populations on Cat Point Bar and East Hole Bar were in poor condition. More detailed sampling and analyses confirmed the condition of oyster resources and suggested that the poor condition was the result of combination of environmental factors and fishery practices. Analyses and observations further suggested that Tropical Storm Debby was only a minor contributing factor to the overall poor condition of oyster resources and confirmed evidence that prolonged drought conditions, continuing low river discharge rates and intensive harvesting were adversely affecting oyster populations in Apalachicola Bay.

This report provides interpretative analyses of sampling data, fisheries data, environmental conditions, fishery practices and other factors to describe the current status of oyster resources and predict oyster fishery trends for the 2012/13 Winter Harvesting Season in Apalachicola Bay. Analyses and observations indicate

that a combination of factors have resulted in a cascading effect that has contributed to the depletion of oyster populations and may lead to longer-term debilitation of oyster resources and oyster reef habitats.

Introduction

The Florida Department of Agriculture and Consumer Services (DACS) shares responsibility for managing oyster resources in Apalachicola Bay with the Florida Fish and Wildlife Conservation Commission (FWC); more specifically, the Division of Aquaculture manages oysters from both resource development and public health protection perspectives. This report summarizes information related to oyster resource compiled by the Division of Aquaculture from 2009 through August 2012.

Oyster Fisheries Statistics

Since 1980, reported landings of oysters in Florida ranged from about 1 to 6.5 million pounds of meats: highest landings were reported in the early 1980s, around 6.5 million pounds. Apalachicola Bay accounts for about 90% of Florida's landings and about 9% of the landings from the Gulf of Mexico (2000-2008 average). Reported oyster landings from Apalachicola Bay for 2011 were approximately 2.4 million pounds of meat, representing a slight increase in landings from 2010 (Table 1).

In 2011, oystermen in Franklin County reported landings of 2,380,810 pounds of meats from 39,176 trips. Landings for Apalachicola Bay are higher than reported for Franklin County, because oystermen in neighboring counties may report landings from Apalachicola Bay in those counties.

Table 1. Oyster Landings in Apalachicola Bay, Florida

Year	Pounds (Meats)	Number of Trips Reported	AB Oyster Harvesting Licenses	Bags/ Trip
2000	2,327,402	25,550	958	13.9
2001	2,333,968	25,261	1,135	14.1
2002	1,725,776	20,294	914	13.0
2003	1,449,890	18,467	759	12.0
2004	1,502,056	17,692	719	12.9
2005	1,260,996	12,663	714	15.2
2006	2,127,049	22,644	916	14.3
2007	2,645,359	29,104	1,142	13.9
2008	2,238,482	27,603	1,168	12.3
2009	2,695,701	39,942	1,433	10.2
2010	1,938,059	32,330	1,909	9.1
2011	2,380,810	39,176	1,799	9.3
2012			1,687	

Landings per trip remained relatively stable during 2010 and 2011, ranging from 9.1 to 9.3 bags per trip. Landings per trip continued to trend downward from about 15 bags per trip in 2005 to about 9.3 bags per trip in 2011. Oyster landings and bags per trip do not show a direct correlation with the number of ABOHL sold; there were 1,799 ABHOL sold in 2011 and 1,687 sold in 2012. The dockside value of oyster landed in Franklin County was estimated at $6.64 million in 2011.

Oyster landings appear to be correlated with three primary variables; resource availability, fishing effort, and market demand. Fishing effort has increased while market demand has been highly variable due to economic instability, concerns associated with the Deep Water Horizon (DWH) oil spill incident in 2010, and inconsistent supplies from other Gulf states.

Oyster Resource Assessments

The Division has conducted oyster resource surveys on the principle oyster-producing reefs in Apalachicola Bay since 1982. This information is used by resource managers to reliably predict trends in oyster production; to monitor oyster population dynamics, including recruitment, growth, natural mortality, standing stocks; and to determine the impacts of climatic events such as hurricanes, floods, and droughts on oyster resources. Sampling oyster populations allows resource managers to compare the relative condition of standing stocks over time using a denned sampling protocol. The Standard Oyster Resource Management Protocol (SORMP) provides a calculation to estimate production based on the density of legal size oysters collected during a defined sampling interval. Production estimates exceeding 400 bags of oysters per acre is applied as an indicator of healthy oyster reefs capable of sustaining commercial harvesting.

The Division of Aquaculture conducted oyster resource assessments on the commercially important oyster reefs in Apalachicola Bay during July 2012. Commercially important reefs included Cat Point Bar, East Hole Bar and the St. Vincent Bar and Dry Bar reef complex. Oyster resource assessments were also conducted on three recently rehabilitated reefs, and on shallow and intertidal reefs in St. Vincent Sound.

Production estimates for July 2012 from Cat Point Bar (287 bags/acre) and East Hole Bar (294 bags/acre) were the lowest production estimates reported in the past twenty years prior to the opening of the Winter Harvesting Season. Similarly, production estimates from St. Vincent Bar and Dry Bar (bags per acre) demonstrated depressed production estimates. Esti-

mated oyster population parameters for Cat Point Bar, East Hole Bar and St. Vincent / Dry Bar are below levels generally observed on these reefs prior to opening the Winter Harvesting Season, and suggest that stocks are not sufficiently abundant at this time to support commercial harvesting throughout the Winter Harvesting Season. Factors affecting estimated production parameters on individual reef complexes are discussed later in this report.

Cat Point Bar and East Hole Bar have historically been the primary producing reefs in Apalachicola Bay. These reefs form a contiguous reef system (except for the Intracoastal Waterway) that extends north to south across St George Sound and separates the sound from Apalachicola Bay. Over the past twenty years, landings from these reefs have been critical to supporting the oyster fishery in the region.

Oyster density and estimated production showed marked declines on Cat Point Bar when compared to 2011. Estimated production declined from 417 bags per acre in August 2011 to 287 bags per acre in July 2012 (Table 2). Oyster densities decreased substantially from 430 to 64 oysters per square meter over the same sampling interval (Table 2). The decrease in oyster density reflects poor recruitment, as well as severely reduced number of oysters in the juvenile size classes, and is indicative of the degraded quality of reef substrate and structure.

Cat Point and East Hole Bar have been subject to a combination of factors that have adversely affected oyster populations, oyster reef habitat, and the oyster fishery. Oyster populations over much of the reef area are depleted and the quality of the substrate is degraded to a point where spat settlement and recruitment

have been disrupted. Stress associated with prolonged high salinity, high natural mortality and predation, and intensive fishing effort have markedly reduced standing stocks of juvenile, sub adult and adult oysters.

The Dry Bar and St. Vincent Bar complex is a large contiguous reef system in western Apalachicola Bay. This reef complex provides a substantial portion of the Bay's landings during normal years, but fishing pressure was sporadic during 2011 and 2012. The estimated production for Dry Bar-St. Vincent (Table 2) indicated a substantial reduction from 323 bags per acre in August 2011 to 215 bags per acre in July 2012. Samples were collected from the Little Gully area on Dry Bar, because no live oysters were collected on St Vincent Bar. St. Vincent Bar, extending from Dry Bar southward was considered to be depleted of marketable oysters. The oyster population on St. Vincent Bar was likely decimated by stress associated with high salinity, disease and predation. Fishing pressure has declined as a result of reduced standing stocks of market-size oysters over the entire reef complex over the past two years. The current condition of oyster resources on Dry Bar is not expected to be at levels that will sustain commercial harvesting through the 2012/13 Winter Harvesting Season.

Estimated production parameters for the reef complexes in the western portion of the Bay and the "Miles" indicate that standing stocks of market size oysters are at various levels. Standing stocks on some reefs will support commercial harvesting, while other reefs show signs of severe stress and depletion. Oyster reefs, including North Spur, Green Point and Cabbage Lumps Plant Sites are in moderately good condition, with standing stocks and production at levels that will support limited commercial harvesting. These plant

sites have been planted with processed oyster shell within the last three years, and the substrate remains in good condition; size frequency distributions are typical of healthy oyster populations. However, these reefs are small and overall production will be limited. Also, oysters on these reefs will likely be subject to intense predation from rock snails, while salinity levels remain high. Oyster populations on shallow and intertidal reefs in the 'Miles' (Spacey's Flats, Eleven Mile Bar, Picolene Bar) are also severely stressed, showing signs of intense predation and natural mortality. Bars in northwestern Apalachicola Bay and eastern St. Vincent Sound, including Green Point, North Spur and Cabbage Lumps are more strongly influenced by river flows than bars located further away from the river mouth. Prevailing flows and circulation patterns move plumes of freshwater westward from the river over these reefs before they are dispersed throughout the Bay and St. Vincent Sound.

The Standard Oyster Resource Management Protocol

Continuous monitoring and data analyses have allowed resource managers to develop a scale using defined sampling protocol to determine the relative condition of oyster resources based on estimated production parameters. The Standard Oyster Resource Management Protocol (SORMP) provides that estimated production exceeding 400 bags of oysters per acre is applied as an indicator of healthy oyster reefs capable of sustaining commercial harvesting. Accordingly, oyster populations are 1) capable of supporting limited commercial harvesting when stocks exceed 200 bags/acre, 2) below levels necessary to support commercial harvesting when stocks tall below 200 bags/acre, and 3) considered depleted when marketable stocks are below 100 bags/acre. Generally, production from Cat Point

Bar has been the most accurate indicator of oyster production in Apalachicola Bay, but East Hole Bar and St. Vincent Bar are also reliable indicators of the condition of oyster resources throughout the Bay. This scale forms the basis for the Standard Oyster Resource Management Protocol provided in Subsection 68B-27.017, Florida Administrative Code, which has been used as the criteria for setting the number of harvesting days in the Winter Harvesting Season in Apalachicola Bay.

DEPLETION OF OYSTER RESOURCES

Standing Stocks and Commercial Production Estimates

Size frequency distributions for oyster standing stocks are strong indicators of the health of oyster populations and are useful for predicting fishery trends. Size distributions among oyster populations are used to evaluate recruitment to the population, recruitment of juveniles to market size, growth, survival and potential production. Accordingly, size frequency distributions can be used to evaluate oyster depletion events. Current analyses of size frequency distributions and oyster standing stocks indicate that oyster populations on the major producing reefs in Apalachicola Bay are experiencing an on-going depletion event.

Oyster populations can be depleted from a number of factors; including climatic conditions, water quality, drought and flood events, catastrophic storms and hurricanes, natural mortality from diseases and predation, and fisheries. Most of the time, depletions occur because of a combination of these factors (multiple stressors).

Data analyses and observations on the major reef complexes showed substantial losses of oyster popula-

tions over the past two years, with severe declines in oyster densities, standing stocks and production estimates. Declining populations can be attributed to less than optimal environmental conditions (prolonged drought, reduced river discharge rates, nigh salinity), storm events (Tropical Storm Debby), and increased predation and natural mortality, weak recruitment, and extensive harvesting on the major reefs. It is evident from divers' observations that many reefs in Apalachicola Bay are showing the negative effects of decreased rainfall and freshwater flow rates from the Apalachicola River over the past two years, including depressed recruitment and increased natural oyster mortality (predation, disease, and stress associated with high salinity regimes). Additionally, the long-term impairment of reef structure (reef elevations, shell matrix, and shell balance) is of serious concern. Each of the factors contributing to oyster depletion in Apalachicola Bay are discussed below.

Prolonged Drought and Elevated Salinity

Adverse environmental conditions can have a devastating effect on oyster populations; and high salinity is among the most detrimental factors. Because oysters are sessile animals, they are not capable of moving when environmental conditions become less than optimal or sometimes lethal. While oysters can tolerate a wide range of salinities, prolonged exposure to less than optimal conditions will adversely impact affected populations. Oysters become physiologically stressed when salinity levels are below or above optimal levels (10-25 ppt) for extended periods, affecting reproductive potential, spatfall, recruitment, growth and survival.

Rainfall and concomitant river discharge are essential for productive oyster populations in Apalachicola

Bay, and provide three critical requirements for survival. First, survival depends upon salinity regimes that are suitable for oysters to reproduce, grow and survive. Rainfall in the drainage basin and discharge into the Bay are essential, as productive oyster populations require a combination for fresh water and marine waters. Fluctuating salinity regimes, within the oyster's tolerance limits, is the single most important factor influencing oyster populations in Apalachicola Bay. Second, rainfall, flooding in the flood plain, and river discharge into the Bay are essential for supplying nutrients and detritus necessary to nourish and sustain food webs and trophic dynamics within the estuarine system. And third, rainfall and river discharge is a critical factor driving fluctuations in salinity levels that prevent destructive predators with marine affinities from becoming established in the Bay. The critical influences of rainfall and river discharge were severely diminished during the past two years. The region and much of the drainage basin have been subject to extensive drought during 2011 and 2012, and these conditions have been reflected in low river stages and low river discharge rates.

Although, environmental conditions improved with relatively normal rainfall and river discharge in 2009 and early 2010, and abundant spat fall was reported on Cat Point and East Hole Bars during 2010, oyster resources have not rebounded completely. Conditions began to decline and drought conditions have persisted in the Apalachicola River Basin since August 2010. With drought conditions returning to the region, decreased rainfall and river discharge have contributed to stress on oyster populations in Apalachicola Bay.

The Florida Panhandle and the Apalachicola River (ACF) drainage basin have experienced prolonged

drought conditions for several years, and the reduced freshwater input into Apalachicola Bay has seriously affected oyster populations in the Bay. Poor recruitment and poor survival can be directly attributed to prolonged high-salinity environment, which is also confirmed by the presence of marine predators, primarily stone crabs and Florida rock snails (oyster drills). The predators are present in great numbers and are currently overwhelming oyster populations throughout Apalachicola Bay. Petes et al., (2012) and Wilber (1992) investigated the effects of reduced freshwater flows on oyster populations in Apalachicola Bay and reported adverse impacts resulting from low river flows.

Natural Mortality and Predation

The combination of high salinity and high water temperatures are known to severely stress oyster populations and may result in massive mortality events. It is highly likely that these environmental factors have contributed substantially to natural mortality and low recruitment in the Bay. High salinity and high water temperatures also correlate with the increased prevalence and intensity of the oyster parasite, *Perkinsus marinus*. This parasite (dermo) is often associated with oyster mortality in the hotter summer months and is commonly described as 'Summer Mortality Syndrome' in Florida. The Department participates in the Oyster Sentinel Program in the Gulf and monitors the presence and intensity of *P. marinus* in oysters in Apalachicola Bay.

Observations by divers confirmed the presence and abundance of stone crabs, *Menippe mercenaria*, on the primary oyster reefs in Apalachicola Bay. Stone crab burrows are easy to recognize and the appetite of these destructive predators is obvious. Stone crab burrows

are surrounded by living and dead oysters; the result of crabs actively foraging and bringing live oysters to their burrows. The shells of devoured oysters are also present and form a ring around burrows. Examining dead oyster shell provides confirmation of the crushing action of stone crabs on the shell of oysters. Stone crabs are considered primary predators of oysters when salinities remain high for extended periods and crab populations become established on oyster reefs.

Observations and sampling confirmed the presence and abundance of the Florida rock snail, *Stramonita haemastoma*, (formerly *Thais haemastoma*), a destructive snail commonly referred to as an oyster drill. Oyster drills are considered as one of the most serious oyster predators along Florida's Gulf Coast, and have become established in Apalachicola Bay over the past two years. Reports from oystermen suggest that drills are more abundant than at any time in recent memory. It appears that drill populations are moving farther into the estuary as oyster populations in the more marine portions of the Bay are depleted. High numbers of drills were found wherever viable oyster populations were observed. The presence and establishment of snail populations correlate with prolonged high salinity waters. It is also disturbing that drills are completing their life cycles within the estuary, since egg cases, juvenile, subadult and adult snails are abundant on oyster reefs.

Additionally, the Florida crown conch, *Melongena corona*, was commonly observed on oyster reefs. These conchs are also known to be serious oyster predators with marine affinities. Mud crabs of various species are also common predators on oyster reefs, generally attacking spat and smaller juvenile oysters.

Increased stress associated with high salinity regimes acts to exacerbate the level and intensity of predation by weakening oysters. Prolonged periods of high salinity result in natural mortality from predation which can have a significant impact on oyster populations and result in serious economic losses to commercial oyster fisheries. The presence and abundance of marine predators on oyster reefs in Apalachicola Bay the long duration of high salinity conditions within the estuary.

Harvesting Pressure

Declining oyster population parameters can be associated with harvesting, as well as environmental influences and natural mortality. Reported oyster landings for Franklin County in 2011 increased marginally over 2010 in both production and bags per trip, but harvesting pressure (as measured in reported trips) increased by about 20 percent. Oyster population parameters for Cat Point Bar and East Hole Bar suggest that oyster abundances and potential production is markedly depressed, possibly reflecting the effects of continuous harvesting, poor harvesting practices, as well as, less than optimal environmental conditions in 2010 and 2011. Over harvesting is most damaging when environmental conditions are less than optimal, recruitment is low, and natural mortality is high.

Resource managers believe that several activities associated with harvesting have had a detrimental impact on standing stocks and oyster resources on the primary producing reefs in St. George Sound in eastern Apalachicola Bay. The standing stocks of juvenile, sublegal, and market-size oysters suggest that the overall condition of many reefs has declined substantially over the past two years as a result of continuous harvesting

from Cat Point and East Hole Bars, concentrated and intensive harvesting by the majority of the fishing fleet, and the excessive harvesting of sub-legal oysters.

Vessel counts during the 2011/12 Winter Harvesting Season show that about 60 percent of the fishing fleet was concentrated on Cat Point and East Hole Bars. Fishing effort often averaged more than 120 vessels per day throughout 2011 and 2012 placing added pressure on Cat Point and East Hole Bars. In response to limiting the number of hours harvest can occur each day to control for *Vibrio vulnificus*, additional harvesting days during 2011 and 2012 were implemented which increased fishing pressure and further deteriorated the condition of the resource. Another contributing factor was the management decision to allow harvesting from these reefs during the summer of 2010 in response to the oil spill event (April, 2010). This resulted in an intense harvesting effort which precluded any recovery time for the resource

Harvesting pressure is usually high on reefs in the eastern portion of the Bay at the beginning of the oyster harvesting season, and in 2011 and 2012 harvesting pressure was almost exclusively directed to Cat Point and East Hole Bars. Harvesting pressure on Cat Point Bar and East Hole Bar in St. George Sound demonstrated an upward trend in effort over the past two years. This change in fishing effort is not easy to explain, since it does not seem to be strictly associated with resource availability. One plausible explanation may be the proximity of St George Sound to Eastpoint, where many licensed oystermen reside and sell their oysters.

Some of the decline of legal-size oysters can be attributed to the excessive harvesting of sub-legal oys-

ters. Since 2010, there have been numerous reports of oystermen harvesting oysters below the legal size limit and observations in the marketplace confirmed that the harvest of small oysters was very common during the DWH oil spill event and has persisted to the present. Excessive harvesting of sub-legal oysters from 2010 through 2012 reduced recruitment among sub-legal size classes to legal size, contributing to declining trends in estimated production in 2012/2013. This situation results from harvesting and culling practices of the fishermen, when sub-legal oysters are not culled and returned to the reef to grow to marketable size.

The practice of harvesting sub-legal oysters appears to be an extension of a "use it or lose it' attitude that prevailed during the fall and winter of 2010. Following the oil spill in April 2010, there was an acknowledged threat to oyster resources in Apalachicola Bay, and management policies were directed toward harvesting available resources in the face of a growing risk of loss. Throughout the period when oil posed an unpredictable threat to the oyster fishery, less effort was directed toward enforcing size limits, perhaps, yielding to the view that it would be more beneficial to harvest the available resource. But unfortunately, many oystermen have continued the same harvesting practices that were allowed during the oil spill threat.

The Division's 2011 *Oyster Resource Assessment Report for Apalachicola Bay* (Division of Aquaculture, 2011) stated that oyster population estimates indicated that recruitment would keep pace with harvesting pressure and sustain production throughout the 2011/12 Winter Harvesting Season: with the caveat that increased harvesting pressure and/or the unabated harvesting of sublegal stocks may alter the production / harvesting balance. In 2011, reports of the harvest and

sale of oysters below the legal size limit was still common practice, and it is now clear that there are not sufficient numbers of juvenile and market size oysters to support harvesting throughout the up coming season.

Tropical Storm Debby

Tropical Storm Debby made its closest approach to Apalachicola Bay on June 25, 2012 before moving eastward and making landfall near the mouth of the Suwannee River. Despite the fact that Debby never achieved hurricane strength, it was accompanied by moderate storm surge in the Big Bend region. Maximum surge at Apalachicola was 3.51 feet.

The greatest impacts to oyster reefs were expected to be in St George Sound and western Apalachicola Bay (St. Vincent Bar) because of the long fetch of open water. Scouring was expected as a result of storm surge and wave action across the Bay. Fortunately, most of the storm surge and strongest wave action occurred during high tides when the reefs are most protected from severe hydrological impacts.

Preliminary reconnaissance following T.S.Debby did not indicate severe disruption of oyster reef structure. Examination of shells and live oysters did not display the effects of severe scouring (ex. polished shell surfaces, abrasion, dead oysters) and observations by divers did not demonstrate extensive disruption of the reefs surface (suspension and deposition of reef shell and sediments, concretion of reef material, or burial of shell and living oysters). Although reef areas were sometimes devoid of live oysters, clusters of oysters were present in adjacent areas that did not indicate severe disturbance. Scouring and wave action may have impacted reef surfaces and oyster resources in some

areas, but widespread damage to reef structure was not observed.

Heavy rainfall and coastal flooding may have an adverse impact on oyster reefs closest to the river and distributaries in the river delta, but the sudden influx of freshwater did not appear to cause extensive oyster mortalities on reefs away from the river delta (reefs in the Winter Harvesting Areas). Preliminary reconnaissance and sampling did not identify oyster populations where mass mortalities occurred; it is generally apparent when a mass mortality event occurs from a freshet or poor water quality (low dissolved oxygen concentrations). However, it remains likely that oyster populations in close proximity to the river delta may be subject to prolonged low salinity and associated low dissolved oxygen concentrations, and may suffer mortalities. There have been some reports of recent mortalities (late July) among oysters on reefs in the Summer Harvesting Area (Norman's Lumps).

Fishery Management Implications

The Department of Agriculture and Consumer Services and the Fish and Wildlife Conservation Commission enacted several policies that allowed oystermen a greater opportunity to harvest available oyster resources in Apalachicola Bay in response to the Deepwater Horizon oil spill event and national shellfish program requirements. The Executive Director of the FWCC signed an Executive Order that allowed commercial harvest of oysters from Apalachicola Bay seven days a week beginning September 1, 2011, contingent upon the Standard Oyster Resource Management Protocol (SORMP). On June 1, 2012, the FWCC enacted rule amendments in Chapter 68B-27.017 that allowed harvesting of oysters seven days a week, year round in

Apalachicola Bay. This action was taken, in part, to accommodate commercial oyster fishermen for time on the water harvesting that was decreased as a result of recent management practices to enhance public health protection. These practices, consistent with national *Vibrio vulnificus* reduction criteria, imposed more stringent limitations on harvesting times from April through November.

Subsection 68B-27.017(1)(a), Florida Administrative Code, provides that oysters may be harvested for commercial purposes on any day of the week. Subsection (1)(b) provides that—If during the period of November 16 through May 31 DACS establishes that the oyster resources on Cat Point Bar and East Hole Bar can not sustain a harvest of 300 bags per acre (SORMP), then the harvest of oysters for commercial purposes shall be prohibited on Saturdays and Sundays. Results of the current assessment indicated mat estimated production on Cat Point Bar and East Hole Bar may not exceed the level provided in the SORMP for DACS to recommend that oyster harvesting for commercial purposes be continued at seven days a week. Oyster resources will be re-assessed in November and recommendations will be forwarded to the Florida Fish and Wildlife Conservation Commission.

FISHERY TRENDS

Analyses of oyster resource assessment data over the past two years indicate several general conclusions regarding oyster resources in Apalachicola Bay.

The outlook for oyster production for the 2012/2013 Winter Harvesting Season in St. George Sound (Cat Point, East Hole, Porters Bar and Platform) is described as "poor". It appears unlikely that oyster populations on Cat Point and East Hole Bars can sustain

concentrated harvesting effort throughout the Winter Harvesting Season.

Declining population estimates over the past two years generally indicated that oyster populations are severely stressed. Although oyster population parameters for 2010 and 2011 reflected relatively stable production estimates, declines in 2012 suggest that overall resource availability may not be capable of sustaining current harvesting levels (bags per trip). The number of bags per trip has continued to decline over the past five years.

Prior to 2009, the demand for oysters from Apalachicola Bay was a primary factor limiting harvests, as harvests did not appear to be limited by available stocks. Higher landings in 2009 likely reflected strengthening market demand and increased fishing effort rather than increased resource availability. However, in 2011/2012 demand for Apalachicola Bay oysters increased because of reduced production from historically productive areas in other Gulf states, while oyster resources in the Bay have suffered during the current drought. Consequently, oyster resources may not be adequate to support increased harvesting pressure and meet increased demand throughout the upcoming season.

Table 2. Cat Point Bar Population Estimates: September 2008 to July 2012.

Sample		Oyster	Mean	Density	Oysters				Bags
Date	Quadrat (0.25m)	Number (n)	Leng. (mm)	(/m)	>50mm (%)	>75mm (%)	(/m)	1000X (/ac)	(/ac)
09/08	20	616	55.2	123.2	66.2	17.21	212	85.8	381
11/08	10	564	52.0	225.6	55.7	19.33	43.6	176.4	784
12/08	10	333	56.9	133.2	66.1	24.92	33.1	134.3	597
08/09	20	828	50.1	165.6	49.9	15.10	25.0	101.1	449
11/09	10	626	48.2	250.4	50.2	7.83	19.6	79.3	352
04/10	20	969	48.4	193.8	46.7	9.91	19.2	77.7	345
08/10	20	1,043	50.5	208.6	53.9	8.92	18.6	75.3	334
11/10	20	865	52.8	173.0	63.7	12.25	21.2	85.7	381
08/11	15	1,611	48.2	429.6	48.5	5.40	23.2	93.9	417
07/12	10	161	58.8	64.4	67.1	24.84	15.9	64.7	287

Table 2. East Hole Bar Population Estimates: November 2008 to July 2012.

Sample		Oyster	Mean	Density	Oysters				Bags
Date	Quadrat (0.25m)	Number (n)	Leng. (mm)	(/m)	>50mm (%)	>75mm (%)	(/m)	1000X (/ac)	(/ac)
11/08	10	318	57.5	127.2	69.1	22.33	28.4	114.9	510
09/09	20	1,023	49.3	204.6	50.7	9.09	18.5	75.2	334
11/10	10	682	47.0	272.8	48.6	9.38	25.6	103.6	460
07/12	10	127	60.8	50.8	65.3	32.28	16.3	66.3	294

Table 2. Dry Bar Population Estimates: September 2008 to July 2012.

Sample		Oyster	Mean	Density	Oysters				Bags
Date	Quadrat (0.25m)	Number (n)	Leng. (mm)	(/m)	>50mm (%)	>75mm (%)	(/m)	1000X (/ac)	(/ac)
09/08	20	1,467	54.0	293.4	64.1	14.86	43.6	176.4	784
12/08	10	986	47.1	394.4	49.8	7.81	30.8	124.6	554
08/09	20	1,353	46.6	272.6	41.2	6.31	17.2	69.6	309
11/09	10	589	45.6	235.6	41.7	7.13	16.7	67.9	302
08/10	20	877	50.2	175.4	50.5	10.83	18.9	76.8	341
11/10	20	1,313	43.1	262.5	34.4	11.65	30.5	123.8	550
08/11	15	567	47.5	151.2	44.8	11.90	17.9	72.7	323
07/12	10[a]	150	56.0	60.0	66.0	20.0	12.0	48.6	215[a]

a - Samples collected from Little Gully on Dry Bar. No live oysters were collected from St. Vincent Bar

Table 2. North Spur (Plant) Population Estimates: September 2008 - July 2012.

Sample		Oyster	Mean		Oysters				Bags
Date	Quadrat (0.25m)	Number (n)	Leng. (mm)	Density (/m)	>50mm (%)	>75mm (%)	(/m)	1000X (/ac)	(/ac)
09/08	5	284	52.9	227.2	60.6	10.56	23.9	97.0	431
09/09	10	541	49.5	216.4	49.9	12.75	27.5	111.6	496
04/10	5	1040	48.0	832.0	50.4	5.10	42.4	171.7	763
08/11	5	269	52.9	215.2	58.0	15.99	34.4	139.2	619
07/12	10	362	53.4	144.8	57.5	18.23	26.4	106.8	475

Table 2. Green point (Plant) Population Estimates: September 2008 - July 2012.

Sample		Oyster	Mean		Oysters				Bags
Date	Quadrat (0.25m)	Number (n)	Leng. (mm)	Density (/m)	>50mm (%)	>75mm (%)	(/m)	1000X (/ac)	(/ac)
09/08	10	482	58.8	192.2	75.9	20.33	39.2	158.6	705
09/09	10	274541	48.2	109.6	44.1	17.52	19.2	77.7	345
09/11	10	510	54.4	204.0	65.5	12.94	26.4	106.5	474
07/12	5	125	59.6	100.0	65.0	28.00	28.0	113.3	503

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SUPPLEMENTAL BRIEF FOR THE STATE OF GEORGIA

Georgia submits this supplemental brief in response to the United States' amicus brief and Florida's supplemental brief.

I. THE COURT SHOULD DENY FLORIDA LEAVE TO FILE A COMPLAINT UNTIL THE CORPS HAS COMPLETED ITS REVISIONS TO THE MASTER MANUAL FOR THE ACF BASIN

Georgia and the United States agree that it would be premature for Florida's equitable apportionment claim to go forward until, at a minimum, the Army Corps of Engineers issues its revised Master Water Control Manual for the entire ACF Basin. In revising the Master Manual—a process that was delayed by decades of litigation—the Corps is evaluating "changes in basin hydrology and water usage, new or rehabilitated structural features, and environmental issues."

Final Updated Scoping Report, Environmental Impact Statement, Update of the Water Control Manual for the Apalachicola-Chattahoochee-Flint (ACF) River Basin, in Alabama, Florida, and Georgia 139 (Mar. 2013) (*Scoping Report*). There is no basis in law or logic for this Court to proceed with a common-law equitable apportionment action unless and until the Corps has completed its statutory duties: federal common law is interstitial in nature, and by definition there are no interstices to fill before the federal statutory framework has been implemented. Thus, as the United States puts it, "[t]he Corps ... implement[s] statutes enacted by Congress to accomplish specified federal purposes on this interstate water system," and "equitable apportionment must give way where Congress has 'exercised its constitutional powers over waters.'" U.S. Br. 19 (quoting *Arizona* v. *California*, 373 U.S. 546, 565 (1963)).

The Corps' updated Master Manual will evaluate and set the minimum flow of water from Georgia's Chattahoochee and Flint Rivers into Florida's Apalachicola River. U.S. Br. 9. Florida points to that flow of water from Jim Woodruff Dam as the cause of its alleged injuries. *See* Compl. ¶¶ 54-59. After the Corps completes its evaluation, the Corps may decide to revise that flow rate as part of the new Master Manual. U.S. Br. 18. If a new flow rate "address[es] some or all of Florida's concerns," there may be no need (or basis) for an original action in this Court. *Id.* 20.

Florida overlooks that the fundamental question is whether it is suffering *harm* from low flows in the Apalachicola—not whether, in the abstract, it is entitled to a particular share of the water in the ACF river system. Florida is therefore wrong to contend that the "'precise question' before the Court here is whether Georgia is taking more than its equitable share" of wa-

ter. Fla. Supp. Br. 8; *see also id.* 5-8. Florida is conflating the *process* of equitable apportionment (allocating States their equitable rights in a river) with the *purpose* of equitable apportionment (mitigating and curing the harms suffered by a downstream State because of an upstream State's excessive diversions). Although the Corps cannot apportion the ACF system (Fla. Supp. Br. 6), that is beside the point. Florida has alleged harms caused by low flows in the Apalachicola River (Compl. ¶¶ 54-59), which will be directly affected by potential changes in the Corps' revised Master Manual (U.S. Br. 9). Until the Corps' revisions are complete, and the new regime for minimum flows in the Apalachicola can be considered, Florida's alleged harms cannot be meaningfully evaluated.

Florida attempts to avoid this conclusion by focusing on its "claims" for an equitable division of water. Fla. Supp. Br. 8. But equitable apportionment does not "vindicate a barren right" to water, *Washington* v. *Oregon*, 297 U.S. 517, 523 (1936); it divides interstate waters to ensure that one State does not "harm[] the other's interest in the river," *Virginia* v. *Maryland*, 540 U.S. 56, 74 n.9 (2003). If a new minimum flow at the Georgia-Florida border eliminates or mitigates Florida's alleged injury, there would be no need for an equitable apportionment. *See Mississippi* v. *City of Memphis*, 559 U.S. 901 (2010) (denying leave to file complaint without prejudice and citing *Virginia*, 540 U.S. at 74 n.9); *Arizona* v. *California*, 283 U.S. 423, 463-464 (1931) (dismissing bill of complaint because "[t]here is no occasion for determining now Arizona's rights to interstate or local waters which have not yet been, and which may never be, appropriated").

The Corps' comprehensive review of the integrated ACF Basin will "provide the Court with relevant in-

formation about the hydrology of the Basin" and "encompass much of the factual development and assessment that would ordinarily be conducted by a Special Master." U.S. Br. 19. Accordingly, there is no basis for this Court to permit Florida's action to proceed until the Corps has finally updated its Manual. Opp. 32. For those reasons, Florida's motion should be denied. Opp. 4, 32; U.S. Br. 1, 12-13, 23.[1]

II. The United States' Proposed Alternatives Are Impractical

Although the United States recommends that the Court should deny Florida's motion as the "preferable course," it alternatively suggests that the Court could stay the proceedings or tailor them "in a manner that minimizes interference with the manual revision process." U.S. Br. 22-23. Those alternative procedures are impractical.

The United States incorrectly suggests (Br. 23) that the parties could "conduct discovery on the Flint pending the Corps' completion of the Master Manual revision," without encountering the same problems that the United States recognizes would bedevil an equitable apportionment proceeding if Florida's action proceeded wholesale, *id.* 17-21. Florida agrees with the United States' alternative proposal, but offers no

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[1] Even after the Corps issues its new Master Manual, it may not be appropriate for this Court to grant Florida leave to institute an original action. To the extent that Florida disagrees with the Corps' conclusions reflected in the new Master Manual and believes that it will suffer harm as a result of those conclusions, an action in a district court under the Administrative Procedure Act may be a more suitable vehicle for those disagreements to be adjudicated by the courts. *See Illinois* v. *City of Milwaukee*, 406 U.S. 91, 93 (1972).

method for segregating discovery on the Flint from the Corps' processes as a whole, other than to offer a tautological response that the "proceedings could be [so] structured." Fla. Supp. Br. 10. Discovery, even limited to the Flint River, would necessarily cover the same "complex matters of hydrology, geology, engineering, and economics" that the Corps is currently evaluating in the ACF as a whole. U.S. Br. 17. The Flint River is part of an integrated hydrological system and cannot be artificially separated from the rest of that system. *See Scoping Report* 2.

Moreover, taking discovery about the Flint River would not be relevant in and of itself; it would be relevant only to the extent it bears on the cause of Florida's alleged harm—low flows in the Apalachicola. Those flows are regulated by the Corps, which considers the flows from both the Flint and the Chattahoochee Rivers, as well as various federal project purposes and environmental requirements, in setting minimum flows from Jim Woodruff Dam. Increases or decreases in the Flint do not necessarily mean an increase or decrease in the Apalachicola. Opp. Br. 19 & n.10. The Flint's effect on the Corps' minimum flows out of Lake Seminole cannot be known until the revised Master Manual is complete. Until then, flow from the Flint will remain a single input within an integrated water system subject to the operations of the Corps. The United States' suggestion of a "limited" proceeding, without a clear delineation between the Corps' current work and the discovery that might be permitted under such a proposal, risks the same duplicative effort and speculative analysis that would plague any equitable apportionment action conducted before the Corps' revisions are com-

plete.[2] Commencing discovery at this time would subject the parties to "time-consuming and expensive" litigation (U.S. Br. 17) that could have little or no ultimate impact on the case, depending on the Corps' updated operations in the ACF Basin.

Nor would it be productive for the Court to grant Florida's motion and then to stay the proceedings until the final Master Manual is implemented. By that time (approximately March 2017 (U.S. Br. 9)), Florida's original complaint will be out of date and will need to be repleaded to reflect new conditions. Certainly Florida will need to replead its allegations of the harm it is supposedly suffering in light of the Corps' revisions (to the extent it suffers or will suffer any harm at all). Florida is wrong to assert that repleading in light of a new minimum flow regime would be a "waste of time and resources." Fla. Supp. Br. 11 n.*.[3]

This conclusion is supported by the doctrine of primary jurisdiction, which, although not directly applicable to this case, does provide instructive reasoning. *See* U.S. Br. 21. Under that doctrine, the courts will "dismiss the case without prejudice" if "the parties would not be unfairly disadvantaged" by dismissal. *Reiter* v. *Cooper*, 507 U.S. 258, 268-269 (1993). That is the case

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[2] The United States cites no precedent for this suggestion, much less precedent that would provide this Court with a workable example of how parties might conduct "limited" discovery in an original action without duplicating or contradicting an agency's expert analysis of the same complicated facts.

[3] For these reasons, it would also be premature to order the parties to brief at this time whether Florida's current complaint states a claim on which relief can be granted. That issue also ought to be decided on a complaint that reflects the Corps' revised operations and findings. U.S. Br. 22-23; Fla. Supp. Br. 9-10.

here. Florida will not be unfairly disadvantaged by a denial of its motion without prejudice: Florida is not facing a statute-of-limitations bar to its complaint, and it faces no obstacles to instituting a new original action at the proper time. *Far East Conference* v. *United States*, 342 U.S. 570, 577 (1952) (preferring dismissal to stay where "[a] similar suit is easily initiated later, if appropriate"); *cf. Carnation Co.* v. *Pacific Westbound Conference*, 383 U.S. 213, 222-223 (1966).

III. Florida Cannot Complain Of Harms That It Contributed To Or Chose To Ignore

Florida has failed sufficiently to allege either harm or causation that would warrant this Court's original jurisdiction. Florida alleges that its "situation is dire," that "thousands of threatened and endangered mussels have died as a result of low summer flows," that Gulf sturgeon and other fish have had their habitats "adversely affected," and that the low flows in the Apalachicola will cause "irreparable harm." Fla. Supp. Br. 4 (internal quotation marks omitted). Florida concludes its supplemental brief by accusing Georgia of "crippling the environment, ecology, and economy of the Apalachicola region." Fla. Supp. Br. 12.

Many of those very claims were evaluated by the Fish and Wildlife Service (FWS) as part of its 2012 Biological Opinion (BiOp). Opp. App. 8a-11a, 30a-35a. In particular, the FWS concluded that the Apalachicola's current flow rates "'will not jeopardize the continued existence'" or "'destroy or adversely modify designated critical habitat'" for threatened and endangered wildlife in the Apalachicola (Opp. 9-10), including the Gulf sturgeon, the fat threeridge mussel, the purple bankclimber mussel, the Chipola slabshell mussel, or thirty-three other federally listed species (Opp. App. 5a-6a, 8a-11a).

After reviewing the FWS's findings, Florida voluntarily dismissed its APA challenge to an earlier-issued Bi-Op and consciously chose not to challenge the 2012 Bi-Op. Dkt. No. 390, 07-md-1 (M.D. Fla. Dec. 13, 2012). Florida mentions none of this in its supplemental brief, despite its repeated insistence that the alleged harms to its "fish and wildlife, ecology, and economy" require immediate resolution. Fla. Supp. Br. 5.

Likewise, Florida should not be heard to complain about the length of time that it may take the Corps to complete its revisions to the Master Manual. Fla. Supp. Br. 5. The only reason the Corps is working on this particular matter now, instead of twenty years ago, is the recently-concluded protracted litigation that was initiated by Florida and others to prevent the Corps from issuing a near-final revised manual almost a quarter century ago. Florida cannot bemoan the fact that the Corps' revisions may take time when Florida was an initiating and driving force in the litigation that stalled the Corps' revisions for so long.[4] This Court

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[4] In 1990, Florida joined Alabama's lawsuit to challenge the Corps' draft report to revise operations. *In re MDL-1824 Tri-State Water Rights Litig.*, 644 F.3d 1160, 1174 (11th Cir. 2011). That case was stayed to permit the parties to pursue settlement, and eventually Florida entered into a temporary memorandum of agreement with the Corps, Georgia, and Alabama that nullified the Corps' draft report. *Id.* Florida later entered into an interstate compact which continued to stay proceedings until 2003, at which point they started again. *Id.* at 1174-1175. In 2001, Florida intervened in Georgia's legal challenge to the Corps' denial of a water request. *Id.* at 1176. In 2003, Florida intervened in another lawsuit to challenge a settlement reached between the Corps, Georgia, and others. *Southeastern Federal Power Customers, Inc.* v. *Geren*, 514 F.3d 1316, 1320 (D.C. Cir. 2008). Florida continued its litigation in these related actions until it lost in the court of appeals and this Court denied certiorari. 133 S. Ct. 25 (2012).

should allow the Corps to complete that process now without intrusion and interference from litigation that will replicate its work. Should Florida then disagree with the Corps' conclusions and still contend that its alleged harms remain, there will be more than adequate time—and a proper forum—for its contentions to be heard.

CONCLUSION

Florida's motion for leave to file a bill of complaint should be denied.

Respectfully submitted.

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INTRODUCTION

The United States' amicus brief lays to rest Georgia's overwrought claims that Florida has brought this important action against the "wrong party, in the wrong court." Opp. 2. Cutting through Georgia's rhetoric and attempts to strain the rules of notice pleading, the United States not only recognizes that Florida's alleged injuries to the Apalachicola Region's ecology, economy, and way of life are "substantial" and "sufficiently pleaded," but that "Florida's complaint states a claim that fits squarely within this Court's original jurisdiction." U.S. Br. 15-17. So at this point, the only serious question before the Court is *how* Florida's action should proceed, not whether it is proper.

Pointing to the Master Manual update being undertaken by the U.S. Army Corps of Engineers (Corps), the United States suggests that the Court should simply "postpone" this properly pleaded action until the Corps has completed its update process—"expected" some three years hence. *Id.* at 9, 23. Not because the Manual update will resolve Florida's claims. The United States correctly recognizes (at 19) that the manual revision process will not—and cannot—resolve Florida's claims. Instead, the United States' interest in delay boils down to a desire to avoid "litigation distractions." *Id.* at 20. Such an interest is not sufficient to outweigh what the United States itself aptly recognizes as Florida's "substantial sovereign interest" in adjudicating a claim "squarely within" the Court's original jurisdiction. *Id.* at 14. And that is especially true where, as here, postponing a properly pleaded action would risk exacerbating possibly irreversible harms to natural resources.

In any event, the United States answers its own conundrum by recognizing that this Court may "account for [its] practical considerations" simply by "structur[ing]" the proceedings in a way that avoids interference with the manual revision process. *Id.* at 22. Allowing the action to proceed in such a structured fashion not only would accommodate the United States' practical concerns, but also Florida's "substantial sovereign interest" (*id.* at 14) in resolving its "equitable share" of interstate waters, which—as the United States agrees (at 16)—only this Court can do, through this action. Accordingly, the Court should grant Florida's motion for leave to file its Complaint, appoint a special master, and instruct the special master to proceed in a way that minimizes interference with the manual process.

ARGUMENT

I. THE UNITED STATES AGREES THAT FLORIDA HAS STATED A CLAIM THAT FALLS "SQUARELY WITHIN" THIS COURT'S ORIGINAL JURISDICTION

The United States' brief repudiates Georgia's arguments that Florida's Complaint fails to allege a claim within this Court's original jurisdiction. As the United States explains:

- "Florida asserts a substantial sovereign interest that falls squarely within the traditional scope of this Court's original jurisdiction," *id.* at 14;
- Florida's "allegations are sufficient to form a properly framed equitable apportionment suit," *id.* at 15; *see also id.* ("[T]he alleged injuries to Florida's economy and ecology are sufficient to invoke this Court's original jurisdiction"); and

- "There is no alternative forum [to this Court] in which this precise legal dispute can be definitively resolved," *id.* at 16.

In short, under the traditional standards to which this Court looks in determining whether to invoke its exclusive original jurisdictional, "Florida's complaint presents a controversy of sufficient importance to invoke this Court's original jurisdiction." U.S. Br. 13-14; *see id.* at 17 ("Florida's complaint states a claim that fits squarely within this Court's original jurisdiction....").

II. THERE IS NO BASIS TO POSTPONE THE COMMENCEMENT OF THIS ACTION

As the United States observes, this "Court has recognized that it has 'a serious responsibility to adjudicate cases where there are actual, existing controversies over how interstate streams should be apportioned among States.'" *Id.* at 14 (quoting *Arizona v. California*, 373 U.S. 546, 564 (1963)). Moreover, the Court's general "object in original cases" is to proceed as "promptly as possible," and avoid "delay [in] adjudication on the merits." *Ohio v. Kentucky*, 410 U.S. 641, 644 (1973). This case—as the United States agrees (at 13-17)—presents a properly framed interstate water dispute within the Court's original jurisdiction. The United States has provided no reason for "postponing" this action for a period of several years, much less for "dismissing" it (even without prejudice). *Id.* at 22, 23.

A. Florida Has Adequately Alleged Grave Harms That Will Only Worsen In Time

At the outset, Florida—as the United States recognizes (at 15)—has adequately pleaded grave

injuries to its environment, culture, and economy. For example, Florida's Complaint alleges that:

- Decreased water flows will "jeopardiz[e] the viability of the Apalachicola Region's ecology, economy, and way of life," Compl. ¶ 7;
- Georgia's "upstream consumption is affecting threatened and endangered species and habitats along the Apalachicola River," *id.* ¶ 53;
- Reduced water flows have "precipitated a collapse of the Apalachicola Bay oyster population fishery, resulting in significant economic hardship to oystermen and others dependent upon oyster harvests," *id.* ¶ 54;
- If inflows continue to decrease (as forecasted), "the productivity of [Apalachicola Bay] will be irreparably harmed," *id.* ¶ 57;
- "Since 2006, thousands of threatened and endangered mussels have died as a result of low summer flows, the threatened Gulf sturgeon's sturgeon's spawning habitat has been rendered inaccessible, and habitat for freshwater fish spawning and recruitment, along with floodplain habitats, have been adversely affected," *id.* ¶ 58.
- "As Georgia's water uses grow, the amount of water entering Florida will continue to decrease, essential fish and wildlife habitats will constrict, and Florida will suffer additional irreparable harm," *id.* ¶ 59; and
- "The situation is dire and the need for relief immediate," *id.* ¶ 60.

The factual allegations supporting these injuries must be accepted as true at this preliminary stage.

See Ashcroft v. Iqbal, 556 U.S. 662, 678 (2009). They underscore that postponing this action for several additional years would come at a grave and potentially irreversible cost for Florida's fish and wildlife, ecology, and economy. The situation can only worsen as Georgia's consumption increases.

B. The Manual Process Cannot—And Will Not—Resolve Florida's Claims

The United States bases its request to postpone this action on "practical considerations" (U.S. Br. 17)—namely, a parochial interest "in completing [the Corps'] Master Manual revision uninterrupted by continued litigation distractions," *id.* at 20. Putting aside whether an interest in avoiding "litigation distractions" can ever be sufficient to override this Court's "serious responsibility to adjudicate cases where there are actual, existing controversies over how interstate streams should be apportioned among States," *Arizona*, 373 U.S. at 564, the government's practical concerns are deficient here.

Most fundamentally, the manual update process indisputably cannot resolve Florida's claims. This is true whether the manual process takes three months, three years, or, as is more in line with the Corps' prior experience in the projects to which it points, longer. *See* U.S. Br. 3-10 (recounting history of the Corps' ongoing efforts to revise operating protocols). The United States acknowledges this. As it forthrightly states—on page 19 of its brief:

> [T]he United States does not own the water in the [Apalachicola-Chattahoochee-Flint River Basin (ACF Basin)] and the Corps has no authority to apportion water among States or determine water rights. That is not a part of

> the manual revision process in which the Corps is engaged, and this Court is thus ultimately the appropriate body to address Florida's pending claims.

That admission should be the end of the matter.

Instead of allocating water rights among the States (which the Corps cannot do), the purpose of the Corps' manual update process is to define "*flow* regimes" for waters that reach federal reservoirs before Georgia consumes them. *Id.* at 17 (emphasis added). As the United States explains, the Corps' process only "include[s] a determination of whether and to what extent *storage* in Lake Lanier will be used to *accommodate* the present and future water supply needs of the Atlanta metropolitan area," consistent with the Corps' statutory responsibilities. *Id.* at 9 (emphasis supplied). This litigation is over Florida's equitable rights to the supply of water in the first place, not to the *manner* in which it happens to flow out of federal reservoirs. Ultimately, Florida's position is that Georgia is over consuming its equitable share of the water supply upstream. The manual process will not change that.

That is what the Corps itself told Congress. In 2005, the Principal Deputy Assistant Secretary of the Army (Civil Works)—who served from 2005-2009 as Assistant Secretary of the Army (Civil Works)—wrote to Senator Jeff Sessions to "clarify the Corps' intentions regarding updating of Water Control Plans" concerning the ACF Basin (*i.e.*, the Master Manual). Add. 1a. After reiterating that "[t]he Corps has no authority to grant water rights or to allocate water among several states," he explained that "[t]hese Water Control Plans are descriptive guides of current operations and conditions for

managing water flows and storage, *and not a prescription for allocating water supply*." *Id.* at 2a (emphasis added).

To the extent that the manual process could inform the relief ultimately awarded in this case, it is marginal and may be taken into account by the special master in entering a final remedial order. *See, e.g., New Jersey v. New York*, 283 U.S. 336, 348 (1931) ("This decree is without prejudice to the United States" and is subject to the authority of Congress and "the powers of the Secretary of War and Chief of Engineers of the United States Army"). But this action is many years—if not a decade plus—away from such a final determination.

C. Postponing This Action Would Depart Grossly From Ordinary Principles

This Court's "object" typically is to *avoid* delay in adjudicating properly framed original actions and to proceed "as promptly as possible." *Ohio*, 410 U.S. at 644. And because a stay of litigation can severely impact parties and their attempts to seek redress, a party ordinarily must satisfy a high standard to secure a stay of an action that otherwise is properly pleaded and before the courts, like the complaint in this case. *See Indiana State Police Pension Trust v. Chrysler LLC*, 556 U.S. 960, 961 (2009) (per curiam) (discussing traditional stay factors). The United States does not even attempt to show that the traditional stay factors are met here—and they are not. Instead, the United States suggests that a stay would be appropriate under the "doctrine of primary jurisdiction." U.S. Br. 21. That is incorrect.

The primary jurisdiction doctrine applies where an agency has regulatory authority over the matter

in dispute—here, interstate water rights. *See United States v. Western Pac. R.R. Co.*, 352 U.S. 59, 63 (1956). Courts have invoked the doctrine where "the *precise question before the [court]* was one within the particular competence of an agency." *United States v. Phillip Morris USA Inc.*, 686 F.3d 832, 837 (D.C. Cir. 2012) (emphasis added); *see Clark v. Time Warner Cable*, 523 F.3d 1110, 1114 (9th Cir. 2008) ("The [primary jurisdiction] doctrine is not designed to 'secure expert advice' from agencies 'every time a court is presented with an issue conceivably within the agency's ambit.'"); *Puerto Rico Mar. Shipping Auth. v. Valley Freight Sys., Inc.*, 856 F.2d 546, 549 (3d Cir. 1988) ("[T]he primary jurisdiction doctrine presupposes that the administrative agency to which referral is made has jurisdiction over the subject matter of the action"). The "precise question" before the Court here is whether Georgia is taking more than its equitable share of the interstate waters at issue. The United States itself admits (at 19) that the Corps lacks competence or jurisdiction to decide that issue.

Likewise, because the revised Manual cannot possibly resolve Florida's claims in this action, there is no "ripeness" problem with commencing this action. *Cf.* U.S. Br. 21. As discussed, the harms Florida faces are real and immediate. Florida has been seeking redress for those ongoing harms for more than a decade. *See id.* at 17. This action, in short, not only is ripe—but long overdue.

III. IN ANY EVENT, AS THE UNITED STATES RECOGNIZES, ITS "PRACTICAL" CONCERNS MAY BE MET SIMPLY BY STRUCTURING THE PROCEEDINGS

Nevertheless, as the United States recognizes (at 22), this Court can "account for the practical considerations" raised by the government by "structur[ing] equitable apportionment proceedings in a way that avoids or minimizes interference with or duplication of the manual revision process" and allows for consideration of the revised Manual.

As the United States observes (at 17), "[a]n equitable apportionment of an interstate river basin is not a simple undertaking. The factual issues involved can implicate complex matters of hydrology, geology, engineering, and economics, applied to great expanses of varied terrain and water uses." That is certainly true here. Factual development alone will be extensive, and could easily remain ongoing in 2017, when the Corps "expects" a final updated manual to be released. Whatever additional light the ongoing revision process could shed on this case (*cf.* U.S. Br. 19), there is no reason to postpone the discovery that *the parties* will seek to take. And discovery is just one part of the process. Equitable apportionment actions often involve threshold motions, summary judgment proceedings, trials, and remedial proceedings, as well as orders that may result in this Court's review. There is no reason to believe that an apportionment action as complex as this one will not proceed at a conventional pace, which would extend the litigation well beyond 2017.

Notably, Georgia has requested an opportunity to file a "motion to dismiss the complaint" on various

legal grounds. Opp. 31 n.20. Recent practice illustrates that it can take *years* to adjudicate such motions alone. *See, e.g.*, *Texas v. New Mexico,* No. 141 Orig. (motion to dismiss not yet decided three years after initial filing of case); *South Carolina v. North Carolina,* No. 138 Orig. (seven years to resolve preliminary issues relative to intervention); *Montana v. Wyoming,* No. 137 Orig. (three years for resolution of preliminary issues); *Nebraska v. Wyoming,* No. 108 Orig. (nine years to complete discovery and motion practice). There is no reason to defer consideration of Georgia's threshold legal objections while the manual process is underway.

Moreover, the proceedings could be structured so that the initial phase of the litigation focuses on the Flint River Basin alone. As the United States explains (at 23), "there are no federal projects on the Flint." *See* Opp. App. 1a (map). So "if Georgia did not file pretrial motions, or if such motions were resolved before the Corps has finished its administrative process, the parties could conduct discovery on the Flint pending the Corps' completion of the Master Manual revision." U.S. Br. 23.

A special master would be well-equipped and positioned to ensure that the initial phases of this litigation do not interfere with the manual process, and to structure the proceedings to allow full consideration of the Corps' input. The United States also would be free, as it suggests (at 20-21), to participate "in these proceedings as amicus curiae" or seek to intervene, and could bring any relevant matters to the attention of the special master. This approach would accommodate Florida's "substantial sovereign interest" in this action, *id.* at 14, while

allowing the action to proceed in a manner consonant with the government's practical interests.

Although the United States recognizes (at 22) that this structured approach could "account for the practical considerations" it raises in its brief, the government tepidly concludes—with scant reasoning to back it up—that, "on balance . . . postponing the proceedings until after the Corps' administrative process is complete would be the *preferable* course." *Id.* at 22-23 (emphasis added). The government has not come close to justifying the extraordinary and unnecessary step of postponing the *commencement* of this critically important litigation. The only reason it gives (at 23) for "prefer[ring]" that course is that "the need for and scope of any equitable decree" could be "more fully evaluated in light of the Corps' decisions about project operations in the Basin." But to the extent the revised Manual has any bearing on the "equitable decree" adjudicating Florida's rights, it may be taken into account as the action proceeds in the structured manner discussed above.*

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* It would be especially inappropriate to dismiss this action, even without prejudice. The State's motion for leave to file a complaint is fully briefed and this Court now has the United States' views that Florida's Complaint meets the traditional requirements for the exercise of the Court's original jurisdiction. It would be a waste of the time and resources of all concerned, including this Court, to require the State to refile another motion for leave to initiate this action—and give Georgia another opportunity to unduly delay this action even further. Moreover, the United States itself professes (at 22) that there is "little practical difference" between dismissing the action without prejudice, or staying it. At a bare minimum, the Court should grant Florida's motion for leave and stay the case.

* * * * *

Georgia's overconsumption of interstate waters in the ACF Basin is crippling the environment, ecology, and economy of the Apalachicola region—creating a "dire" situation for Florida and its residents. Compl. ¶ 60. The United States recognizes (at 17) that Florida's Complaint "fits squarely within this Court's original jurisdiction," and that only this Court can adjudicate the State's claims and order an equitable apportionment. *Id.* at 16. And the United States recognizes (at 22-23) that its "practical" concerns with respect to the manual process can be "account[ed] for" by structuring this action to avoid interference with that process. There is, accordingly, no reason to delay any further the commencement of this critically important action.

CONCLUSION

The Court should grant Florida's motion for leave to file its Complaint, appoint a special master, and advise the special master to conduct the proceedings in a way that minimizes potential interference with the manual process.

Respectfully submitted,

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ADDENDUM

ADDENDUM

Department of the Army
Office of the Assistant Secretary
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108 Army Pentagon
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[25 Apr 2005]

[SEAL] [SEAL]

Reply to
Attention of

The Honorable Jeff Sessions
United States Senate
335 Senate Russell Office Building
Washington, DC 20510

Dear Senator Sessions:

This is in response to your letter of April 14, 2005, addressed to LTG Carl A. Strock, Chief of Engineers, regarding the U.S. Army Corps of Engineers' (Corps) handling of matters pertaining to the Alabama-Coosa-Tallapoosa (ACT) and the Apalachicola-Chattahoochee-Flint (ACF) river basins. I appreciate the opportunity to address the concerns raised in your letter and to clarify the Corps' intentions regarding updating of Water Control Plans.

As noted in your letter, the Department of Justice recently filed a Notice of Proposed Actions with the U.S. District Court, Northern District of Alabama, Eastern Division. Among other things, the Notice explains to the Court, and interested parties, the need to update the Water Control Plans for the ACT and ACF river basins. It is not the Government's intention to preempt a court ruling on the ACT and ACF issues

(nor could the updates have such an effect in my view). Prior to filing the Notice, the Commander of the Corps' South Atlantic Division communicated with the Governors of the States of Alabama, Florida, and Georgia letting each know of the intended filing and the need to update the Water Control Plans. The States of Alabama and Florida, in pleadings filed with the U.S. District Court, Northern District of Alabama, Eastern Division, complained of the lack of current Water Control Plans for these river basins. The Corps, in updating the Water Control Plans, is addressing these complaints. The Corps is required to update these Plans in accordance with internal regulations and Federal law.

Updating these Water Control Plans to reflect current operations as they have evolved due to changing conditions in the basins is not intended to address or resolve the issues related to water supply for North Georgia or resolve the water rights issues among the States. The Corps has no authority to grant water rights or to allocate water among several states. These Water Control Plans are descriptive guides of current operations and conditions for managing water flows and storage, and not a prescription for allocating water supply. Further, these updated Water Control Plans will not allocate or reallocate water rights within the ACT and ACF river basins.

I appreciate fully that water continues to be withdrawn from Lake Lanier for municipal and industrial water supply. Inclusion of these withdrawals and any discussion of them in the updated Water Control Plans, and corresponding NEPA documentation, will not confer any temporary, permanent, or vested rights in these waters. In fact, the updated Water Control Plans will acknowledge the lack of current contracts

for certain withdrawals, and will accurately report that such Water Control Plans do not serve as a de facto allocation, reallocation, or apportionment of water rights.

The interests of the Corps are to carry out its responsibilities under the law as it pertains to the stewardship of congressionally authorized water resources projects in the ACT and ACF river basins, Consistent with those interests, the Settlement Agreement in the *Southeastern Federal Power Customers, Inc.* case, referred to in your letter, was intended to establish only interim water storage contracts to assure that the Water Supply Providers paid appropriately, in accordance with Corps regulations, for the storage space being utilized for water withdrawals from Lake Lanier. The Settlement Agreement was the culmination of court-ordered mediation. It was never the Corps' intention to vest any new or additional water rights in the Water Supply Providers as was expressly recognized in the Settlement Agreement.

I appreciate that the State of Alabama is of the view that this Settlement Agreement had a baleful influence on the conclusion of allocation agreements under the Compact. I feel confident this result was in no way intended by the Corps, and I am anxious to work with you in an effort to bring the States back together to address these issues.

I emphatically disclaim any purpose on the part of the Army to legitimize through interim water storage contracts any water rights in Georgia that Alabama and Florida regard as illegitimate. Moreover, I assure you that the Corps will operate federal projects in the ACT and ACF river basins consistent with all Congressional authorizations, specific and general,

and will strive to strike the most appropriate balance of project purposes. I am fully committed to involving all the States fully and fairly in a transparent and collaborative update process for these Water Control Plans.

Very truly yours,

/s/ John Paul Woodley, Jr.
John Paul Woodley, Jr.
Principal Deputy Assistant Secretary of the Army
(Civil Works)

RECORD AND BRIEFS

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In The Supreme Court of the United States

STATE OF FLORIDA,
Plaintiff,

v.

STATE OF GEORGIA,
Defendant.

SUPPLEMENTAL BRIEF FOR FLORIDA

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ARGUMENT

Florida submits this supplemental brief in response to Georgia's intervening brief.[1]

1. Despite renewing its erroneous (*see* U.S. Br. 15) argument that Florida has not adequately pleaded injury, Georgia does not seriously challenge Florida's lead argument—backed by the Solicitor General—that "Florida's complaint states a claim that fits squarely within this Court's original jurisdiction." *Id.*; Fl. Supp. Br. 2-3. Instead, Georgia focuses its arguments on its contention that this action should not "go forward until, at a minimum, the Army Corps of Engineers issues its revised [Manual]"—years from now. Ga. Supp. Br. 1. Georgia's arguments are unpersuasive. As the first footnote of its brief underscores, Georgia is simply seeking to delay an adjudication of Florida's equitable share of the waters at issue for as long as it can. The Court should not condone that effort.

2. Georgia argues (at 2) that Florida "overlooks" the distinction between the *harm* it is suffering and the *claims* it has advanced to redress those harms. That argument should be rejected.

Georgia concedes (at 3) that "the Corps cannot apportion the ACF system"—the relief that Florida seeks through this action. Yet Georgia argues (at 3) that this action should not be allowed to proceed because the revised Manual will establish "a new minimum flow at the Georgia-Florida border" that

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[1] On October 8, 2014, Florida filed a supplemental brief responding to the United States' amicus brief (only). Georgia—after receiving service of Florida's brief—filed a supplemental brief the following day, responding to both the United States' amicus brief and Florida's supplemental brief.

could "eliminate[] or mitigate[] Florida's alleged injury." This argument is a sleight of hand. It is true that water flows in the ACF system from Georgia to Florida through the Lake Seminole reservoir and Jim Woodruff Dam. But Woodruff is a pass-through facility; it has "only very limited storage" capacity.[2] The problem necessitating this action is Georgia's overconsumption of waters *before* they enter the Corps' reservoirs. Water that Georgia over consumes upstream on the Chattahoochee or the Flint Rivers cannot make it to Florida—no matter how the Corps tinkers with its flow rates.

The Solicitor General recognized the disconnect between the operation of the Corps' reservoirs and the harms inflicted by Georgia's over consumption of waters when he urged the Court to deny certiorari in the *Tri-State Water Rights Litigation*. That action involved the Corps' operation of the Buford Project

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[2] *See* U.S. Army Corps of Engineers, *Final Updated Scoping Report, Environmental Impact Statement, Update of the Water Control Manual for the ACF River Basin, in Alabama, Florida, and Georgia*, at 5 (Mar. 2013), *available at* http://www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/docs/1ACF%20Scoping%20Report_Mar2013.pdf (noting that the "Jim Woodruff Dam/Lake Seminole [is] operated as a run-of-river project[]" and has "only very limited storage"); U.S. Fish & Wildlife Service, Panama City Field Office, *Biological Opinion on the U.S. Army Corps of Engineers, Mobile District, Revised Interim Operating Plan for Jim Woodruff Dam and the Associated Releases to the Apalachicola River*, at 7 (May 22, 2012), *available at* http://www.fws.gov/southeast/news/2012/pdf/woodruffBOFinal.pdf. (recognizing that "Lake Seminole has very limited storage capacity" and is "essentially operated as [a] run-of-river reservoir[] (*i.e.*, what goes in comes out without being stored for any substantial amount of time)"); *id.* ("releases from Woodruff Dam reflect the downstream end-result" of the water system).

near Atlanta. As the Solicitor General argued, readjusting the operation of the Buford Project "would not necessarily prevent the economic and environmental harms Alabama and Florida" complained about, because "Georgia would still be able to withdraw the water it seeks, depriving Alabama and Florida of flows downstream." *Florida v. Georgia*, No. 11-999, Opp. for Fed. Resps. 31. That is exactly the problem here.[3]

3. Georgia also attacks (at 4-5) Florida's arguments concerning the common-sense path forward that the Solicitor General has proposed for avoiding any potential interference with the manual revision process—simply structuring the litigation to avoid any such interference. U.S. Br. 22-23. But once again, Georgia's response is unpersuasive.

To begin with, Georgia does not dispute, nor could it, that equitable apportionment actions typically take several years, if not a decade or more, to litigate. Fl. Supp. Br. 9. There is no reason why the initial phases of this litigation cannot be conducted while the manual revision process is being completed—and, conversely, no reason to make Floridians wait three or more years until the final

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[3] Georgia cites (at 3) *Mississippi v. City of Memphis*, 559 U.S. 901 (2010), and *Arizona v. California*, 283 U.S. 423 (1931). But in *Mississippi*, the Court did not issue a decision, and the footnote cited from *Virginia v. Maryland*, 540 U.S. 56, 74 n.9 (2003), simply acknowledges the equitable-apportionment doctrine. And in *Arizona*, it was conceded that there was no "present" interference with the enjoyment of water rights at the time of the action was brought. 283 U.S. at 460. Here, Florida has adequately alleged *present and ongoing* violations of its rights to an equitable share of upstream waters.

Manual is expected to be released, before even *commencing* the initial phases of this case.

Georgia takes issue (at 5) with the suggestion (Fl. Supp. Br. 10) that discovery could be conducted concerning the Flint River, claiming that such discovery would necessarily impact Corps' operations on the Chattahoochee. Not so. Discovery could commence on such matters as the location, size, and use of private reservoirs on the Flint; the historical volumes of water used for municipal and industrial purposes on the Flint; the planned future municipal and industrial growth on the Flint; the historical pumping amounts and location of irrigation uses on the Flint; whether Georgia has developed conservation plans for the Flint Basin; the types of water distribution systems on the Flint; and so on. None of these areas would implicate or interfere with the manual revision process for the Corps' facilities on the Chattahoochee River.

Georgia back tracks from its initial request for an opportunity "to file a prompt motion to dismiss the complaint" (Opp. 31 n.20), and now says that it would be "premature" to entertain a motion to dismiss. But that flip-flop is just opportunistic. Once Florida's action is allowed to go forward, Georgia will undoubtedly file a motion to dismiss on legal grounds (as it indicated it would) and there is no reason to postpone the adjudication of such a motion. Georgia's arguments that Florida might not be able prove harm as an *evidentiary* matter would provide no reason to dismiss the complaint *as a matter of law*. The question on a motion to dismiss would be whether Florida's complaint—accepting the allegations as true, *Ashcroft v. Iqbal*, 556 U.S. 662,

678 (2009)—fails to state a claim. There is no reason to postpone consideration of such a threshold motion.

Georgia claims (at 6 n.2) there is "no precedent" for structuring an action in this fashion. But courts and special masters are well-accustomed to phasing litigation and well-positioned to do so. And what is truly unprecedented is the notion that this Court would take a case that "fits squarely" within its original jurisdiction and that sufficiently alleges substantial harms (U.S. Br. 15), and either dismiss the action or put it on hold for a period of three years or more—while the harms persist, and worsen.

4. Georgia also takes another stab at arguing that Florida has failed adequately to allege an injury and belittles Florida's averment that the "'situation is dire.'" Ga. Supp. Br. 7 (quoting Fl. Compl. ¶60). As the Solicitor General has explained (at 15), however, Florida's complaint adequately alleges harm. That includes grave harms to the Apalachicola Basin's environment, ecology, and economy. Fl. Supp. Br. 3-5. Georgia goes even further and argues (at 8) that *Florida itself* is to blame for the situation it now faces. But Georgia has a selective memory of how the States got to this point. *See* U.S. Br. 3-8. And, in any event, Georgia is just arguing the merits. It is time to appoint a special master and allow this important and overdue action to proceed.

CONCLUSION

The Court should grant Florida's motion for leave to file its Complaint, appoint a special master, and advise the special master to conduct the proceedings in a way that minimizes potential interference with the manual process.

Respectfully submitted,

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